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BRANCH OFFICE,
AUSTRALASIA:
NORMANBY CHAMBERS,
MELBOURNE.

Printed at Stationers' Hall,]

ESTABLISHED IN
ENGLAND 1859.
AUSTRALASIA ... 1885.

[Registered for Foreign Transmission.

N 417. VOL. XXXII.

APRIL 14, 1888.

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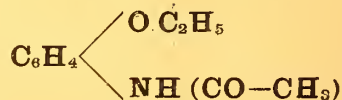
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Exchange 1 gross clean 3d. size emu-killer for either 1 lb. potass. iodide, 1 lb. opium, 2 oz. morphia, or 4 oz. quinine Exchange, at half retail, one gross 1s. sixpence bar and rosemary hair restorer for 9 guineas, mercurials, &c. Banner, Ber Street, Liverpool.

Chemist and Druggist, 1884-5-6-7, missing; *Pharmaceutical Journal*, 1879-80-1-2-3, bound (7 volumes); 1885-6-7 bound, one missing. Christopherson, Swansea.

WANTED.

Copies of the *Chemist and Druggist* for 1885: Jan. 15, March 6, April 17, July 3, Aug. 7, Sept. 18, Nov. 27. Write to 34 The Publisher, The *Chemist and Druggist*, 42 Cannon Street, E.C., for price.

Index for *Chemist and Druggist*, 1; price 1s. Address, 35/23.

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Flame, horse, 3 blades; price. 10s. 6d. Diagonal.

Tanner's "Index of Diseases," 2nd edition. Jenkins, Faversham.

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Copies of *The Chemist and Druggist* for 1885: 25, 1888; 44, given per copy, at to 54/8, The Publisher, THE CHEMIST & DRUGGIST, 42 Cannon Street, E.C.

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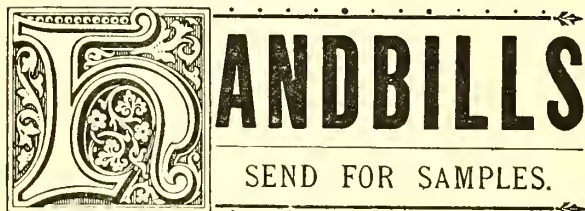
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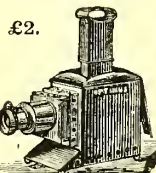
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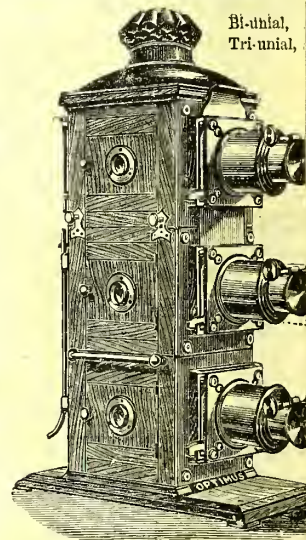
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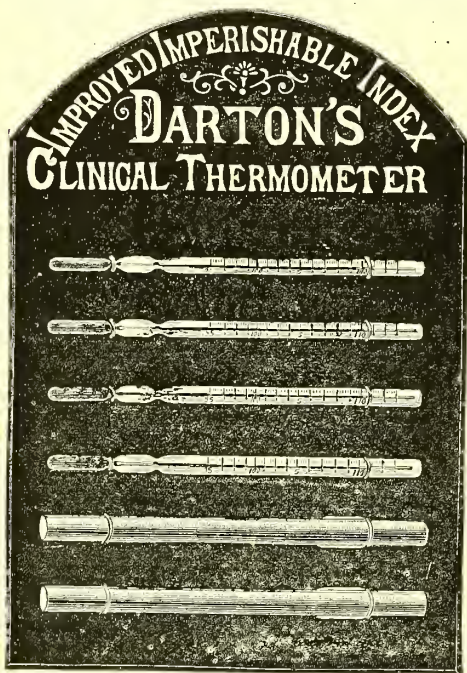
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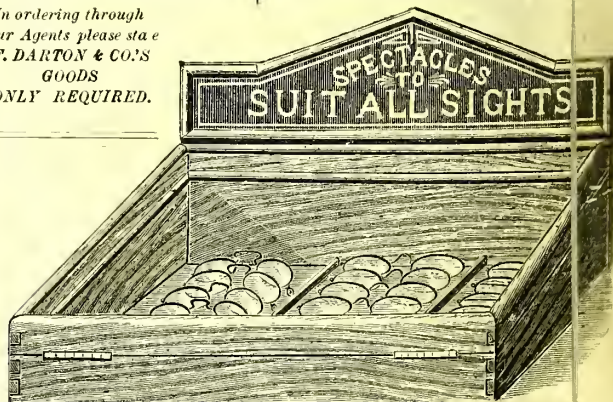
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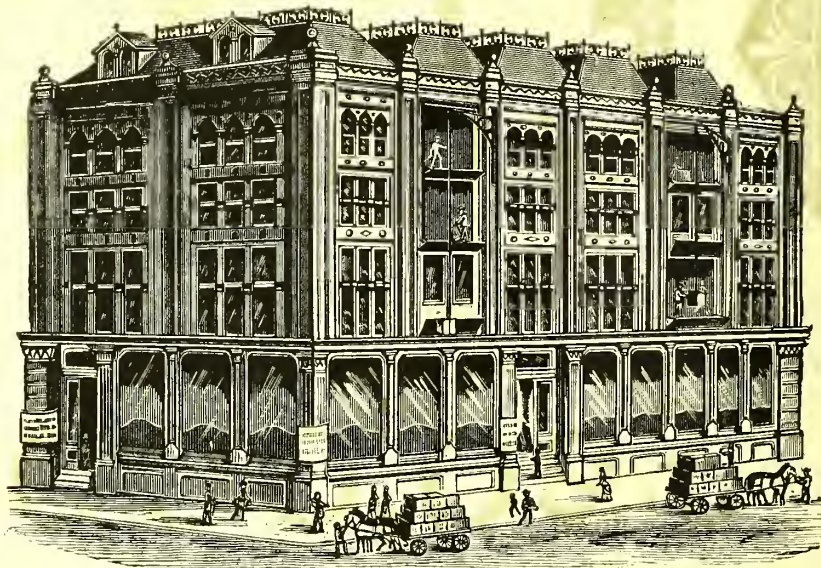
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1d. " " $\frac{1}{2}$ gross boxes	" 6/6*	" 8/6
$\frac{1}{2}$ -Bottles (flat or round), reputed $\frac{1}{2}$ -pint	" 16/	" 24/
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12 $\frac{1}{2}$ -gallon Casks (casks free).. ..	each 20/	" 32/

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In 8 oz. square-stoppered bottles, 48/ per gross.
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IN THE HIGH COURT OF JUSTICE, Chancery Division, on the 23rd July, 1887, the case of *THE GREAT TOWER STREET TEA COMPANY, Limited, versus LANGFORD & CO., Plymouth*, was decided. Mr. Justice Stirling (without calling upon Counsel for the Plaintiffs to reply) gave judgment in favor of *The Great Tower Street Tea Company, Limited*, and granted a Perpetual Injunction, with costs, restraining the Defendants from packing their Teas in the manner complained of, or in such way as would lead the public to suppose they were the Teas of the Plaintiffs.



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ASSAM CONGOU, New Season's Whole Leaf Tea ..		1/8
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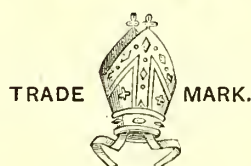
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Mitre "Broken Leaf"	s. d. 1 4
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Mitre "Broken Leaf"	s. d. 1 4
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"We are, yours truly, H. C. BAILDON SON."

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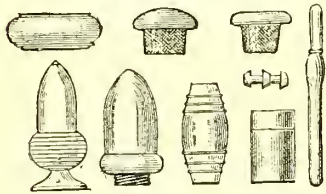
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Will make 8 gallons of sparkling, wholesome, and refreshing

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Unequalled in strength and richness of flavour by any preparation made from fresh herbs.

The Extract is very carefully manufactured, on the most improved scientific principles, from the herbs and plants gathered and dried at the proper season, when their virtues are in full vigour, thus retaining their invigorating and health-giving properties.

It makes an excellent beverage, giving natural flavour and colour, and a sparkling foam like bottled ale.

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ADAMS'S GINGER ALE ESSENCE

makes a sparkling, refreshing, and invigorating beverage for summer and winter.

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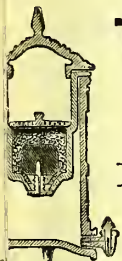
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As supplied to the War Office.

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NOTE.—The Folios shown in this Index are those at the FOOT of the Page, and NOT at the Top.
This arrangement is necessary in order to meet the requirements of the Post Office.

Foot of page		Foot of page		Foot of page	
ADAMS, B.	Extract of Herbs 14	EVANS, SONS & CO.	Cubeb Cigarettes and Capsules 32	MERCER, L.	Almity 33
ADAMS, CALDER GLASS BOTTLE CO.	"International" Feeding Bottles 37	EVANS, LESCHER & WEBB (London)	Fluid Extracts 32	MIDDLETON, KIRKPATRICK & BARR	Tartaric Acid 28
ALLEN & HANDBURY, Soluble Saccharin, COVER	APOLLINARIS Water 14, OUTSIDE COVER	EVANS, SONS & MAISON, LIM. (Montreal)	6	MIKADO MENTHOL CO.	Menthol Capsules 31
APOLLINARIS Water 14, OUTSIDE COVER	TEXT 490	EXCHANGE COLUMN	6	MILLS, R. M., & CO.	Aerated Waters 14
ARMSTRONG, NELSON & CO.	Cocoa Wine 44	FAYARGER & CO.	Siphons 14	MUMFORD, G. S. Pure Crushed Linseed, TEXT	490
ARMSTRONGS WANTED	Coloured Supplement	FENNINGS, ALFRED	Children's Powders	NEWBALL & MAISON	Extract of Herbs 30
ATKINSON, J., & CO.	Perfumery 47	FLETCHER, FLETCHER & STEVENSON	OUTSIDE COVER	OAKEY & SONS	Wellington Knife Polish 40
ATKINSON, J., & CO.	Perfumery - Cauter 36	FORD, SHAPLAND & CO.	Concentrated Liquors, TEXT 490	ORRIDGE & CO.	Transfer Agents Coloured Suppt.
AUS & CO.	Boxes 39	FRIEDLANDER, A.	Coloured Counter Bills 4	PEARS SOAP	
AUS ALIAN MEAT CO.	Extract of Meat, "Ramonie" 15	GIBSON, R.	Electric Portable Lamp 41	PERKEN, SON & RAYMENT	
BARTT & FOSTER	Aerated Water Machinery, OUTSIDE COVER	GLOBY, R.	Medicated Lozenges 15	PETERSON, M., & CO.	Sponges 34
BARTT & FOSTER	Soda-water Machinery & Appliances 7	GLUOY MANUFACTURING CO.	41	PHILLIPS, G. & CO.	Pure Spirits of Wine 40
BARNES, S. YVRE & CO.	Wholesale Druggists 31	GOODALL, BACKHOUSE & CO.	41	POCOCK, KEEVILL & CO.	Patent Thermo Feeding Bottle 36
BATE, J. R.	Vermine Killer 30	GREAT TOWER STREET TEA CO.	Household Specialities 12	POTIUS, H., & CO.	Boys' 27
BEELE, J., & CO.	Blood Mixture 31	GRINDLEY & CO.	Petroleum Jelly 4	POTTER & CLARKE	Extract of Herbs 32
BENEFIT TESTIMONIAL	4	HARKER, STAGG & MORGAN	Essential Oils 28	RAIT, G. L., F.C.S.	Analytical Chemist 44
BIRNBAUM VINEGAR BREWERY CO.	45	HARRIS, P., & CO.	Pure Oxide of Zinc 28	RICHFORD, E. M.	Indiarubb r Type 44
BISH, A., & SONS	Granular Effervescent Pr parations 27	HARSTON & CO.	Ginger Ale 41	RICHTER'S, DR.	Pain Expeller, TEXT 490
BLYTH, N. T. YVRE, & CO. Medicated Lozenges	43	HAY, W.	Hop Ale Essence 21	ROBBINS, J., & CO.	Drugs 32
BRAFR & CO.	Sills 43	HAYWARD TYLER & CO.	Soda-water Machinery 15	ROBERTSON, J., & CO.	Patent Coal Machine 34
BRAFR & HINCHLIFFE	Soda-water Machinery 15	HENRY, T. & W.	Calcedine Magnesin 10	ROBINSON, B. J.	Concentrated Waters 34
BREITTS, E., & CO.	White Flint Glass 37	HESSELINE, WM. & SON	Premier Tea 10	SANITAS, THE, CO., LIM.	TEXT 490
BREITTS, E., & CO.	"International" Feeding Bottles 37	HICKISSON, J.	Marking Ink 37	SANITARS BROS.	Private Tutors 44
BRIE HIGYENIC CO.	Almond Popoline 36	HOP BITTERS CO., THE	30	SCHOOL OF PHARMACY	
BURUGHS, WELLCOME	Digestion and Diet Remington's Pharmacy 25	HORN & SON	Patents and Trade Marks Agent 14	SEAL OF PATENT, LIM.	Dog Food 31
BUSBY, W. J., & CO.	Essential Oils 24	HUNYADI JANOS.	Waters 14	SHIPKOFF & CO.	Oil of Rose 47
BUSBY, W. J., & CO.	Druggists 24	IDRIS & CO.	Aerated & Mineral Waters & Lime Juice 23	SILICATED CARBON FILTER CO.	47
BUSSES FOR DISPOSAL	Coloured Supplement	INGRAM & ROYLE	"Horsemen" Mineral Water, COVER	SMITH, STEPHEN & CO., S.V.E. Spirits of Wine	40
CADRYSBROS.	Cocoa Essence, COVER	IRVIN & SKELLERS	Boxes 11	SMITH, T. J.	God-father Oil 31
CAPL & W. B.	Crinidine 44	ISAACS, I., & CO.	Dispensing Bottles 38	STERN, G. & G.	P. Milne 33
CASL L. J., & CO.	Teas 11	JAMES, W. H.	Horse Blisters 13	STEVENSON & HOWELL	Aerated Waters, Corals, &c. 3
CASL MENTHOL CO.	Menthol Cones 40	JEWELL, BROWN & BROWN Sparkling Table Waters	22	STEWART, G., & CO.	Sealing Wax 47
CASL JOHNSON & CO.	Perfuming Blossom Ceylon Tea 11	JOHNSON, H. An Epitome of Law and Practice	50	STOCKER, G.	47
CHESTERS AERATED & MINERAL WATER	40	KEARLEY & TONGE	Mitre Tea 13	SUTTON, OSCAR, & CO.	"O.S." Tooth Block 40
CHESTERS AERATED & MINERAL WATER	40	KEMPTING, T.	Insect Destroying Powder 50	SWANN, DR. Church's Syrup of Hypophosph.	34
CHESTERS AERATED & MINERAL WATER	40	KIMPTON, R.	Practical Manual of Venereal and Generative Diseases 50	TODD, A. M. "Crystal White" Oil of Peppermint	28
CHUMILL, J. & A.	Books 4	LAZENBY & SONS	Harvey's Sauce 49	TOMLINSON & HAYWARD	Sherry, Brandy and Butter Colours 16
CLAUDE & S.	The Nursery Food Warmer 46	LIEBIG & CO.	Extract of Meat 19	TOWNSEND, J.	Handbills, Printing, &c. 46
COLLIER & HARDING	Gills, Paints, &c. 46	LIVERPOOL SCHOOL OF PHARMACY	5	TREATT, R. C.	Perfumery 47
CORRI, J. R.	Engraved Window Tablets 41	LOISELITE, PROFESSOR	43	TYPEKE & KING	Chemicals 38
CRIELEY, T.	Starch Glaze 41	LONGMANS, GREEN & CO.	43	TYRER, P.	Borough Ketchup 11
CROFT, F. B.	Damiana Waters 25	LONDON HOMOEPATHIC HOSPITAL AND MEDICAL SCHOOL	5	UNIVERSAL SIMPLEX TYPE WRITER	4
DAH, DYSPESIA CAKES	43	LYNCH & CO.	Enemas, COVER	VACCINE ASSOCIATION Pure Vaccine Lymph	31
DAH, F., & CO.	Spectacles & Clinical Thermometers 8	MACK, H.	Pastil Mack 39	WALKER & DALRYMPLE	Teas 11
DARNSON	Horse and Cattle Medicines 38	MACKESSON & ROBBINS	Pills 31	WARREN, A. S. J.	St. David's Sea Salt 41
D		MACNAIR, J. & D., & CO.	Gums, Shellac, &c. 41	WENHAM, THE CO. Ventilating Lamp TEXT	490
D		MANCHESTER SCHOOL OF CHEMISTRY	AND PHARMACY	WERNER & FLEIDERER	Machinery 39
D		MAW, SON & THOMPSON	Pricing Current 29	WESF. T.	Chemicals 38
D		MAY & BAKER	Pharmaceutical Preparations 35	WILLS & WOOTTON (WESTMINSTER COLLEGE)	5
D		MAY, ROBERTS & CO.	Dr. Hooper's Pills 30	WILSON, W.	Too'hache Pellets 44
D				WOOD, VINCENT	Chest Protectors, c. 31
D				WOODHALL, S.P.A.	Mineral Water, TEXT 490
D				WILEY, C.O.	Chester Pills, Pharmaceutical Preparations, Wholesale Druggists, 30

CLASSIFIED LIST OF ALL ADVERTISERS

Where Announcements appear in "THE CHEMIST AND DRUGGIST." Those whose Names do not appear above are published in one of the other issues of this month.

<p>ACIDIC ACID Dunn and Co. Mor and Callard (Salts)</p> <p>ACID AND MINERAL WTS Ade B. Apollonius (Honeyadi, Fried- richall, and Apollonaris) Barrett and Foster Car H. W., & Co. (Ginger Assence) Chas. A. Aerated Waters Citation Dart T., Geo., & Co. Ellis (uthin) Eva Sons and Co. Har- Hay Haw, & Co. (Citric Acid Phos) Hur L. James Idri Id Co. Ing Jew- and Royle Johns and Brown Johns Mineral Water Co. 1) Mill Id Co. (Bourne) Tou Spring Natural Mineral W Co. Tay T. and F. J. Wol All Spa [SINGER ALL.]</p>	<p>DITTO PLANT [See SYPHONS and ESSENCES.] Barnett and Foster Bratby and Hincliffe Bush, W. J., and Co. (Foam Producer, &c.) Favarger, H. Gueret Freres Tyler, Hayward, and Co</p> <p>AGENCIES ABROD Appleby and Hale Australian Drug Co. Campbell, N. S., and Co. Cocking (Japan) Evans, Sons and Mason (Lim.) (Canada) Felton (Melbourne) Fougere (New York) Kempthorne (New Zealand) Macnaughton, F. J. Prosser, E., and Co. (Sydney) Roberts (Paris, &c.) Rocke (Melbourne) Sharland & Co. (Auckland N.Z.) Soul, W. H., and Co.</p> <p>ALKALOIDS Howards and Sons (Cinchona) Smith, T. H.</p> <p>ALMILAJ Mercis, L.</p> <p>AMMONIA May and Baker White, A., and Sons</p>	<p>ANALYSIS Rait, G. L., F.C.S.</p> <p>APPARATUS Bracher & Co. (Automatic Distilling) Brinley and Goodwin Clarke, S. Food Warmer) Friedlaender, A. Hughes, C. (Dissolving Views) May, Roberts (Water-bath) Orme (Scientific) Perken, Son and Rayment (Scientific) Rogers, P. and Co. Rothemel, Paul (Vinegar)</p> <p>BANDAGES Bailey, W. H., and Son Bole Hall Mill Co. Robinson and Sons</p> <p>BATH GLOVES Maw, Son and Thompson Sherlock Bros.</p> <p>BOXES Austin and Co. (Cardboard) Irvin and Sellers Metz, Paul (Willow) Self-Opening Tin Box Co.</p> <p>BICARB. SODA Gaskell, Deacon and Co. Howards & Sons Mey and Baker</p>	<p>BEE-SWAX & HONEY Bowdler & Co.</p> <p>BISMUTH. PREP. Burroughs, Wellcome and Co. Hurren, Spire and Francis Hewlett and Sons Howards and Sons May and Robert Symes and Co.</p> <p>BLOOD MIXTURE Beddler, J., and Co. Lincin and Midland Counties Drug Co.</p> <p>BOOKS Bailey, J. Bell, G., and Sons Churchill, J., and A. Dobell, Dr. James, Dr. Prosser Johnson, J. and J. H. Keene and Ashwell Kington, R. Lewis, H. K. Loisette, Professor Longmans, Green and Co. Renshaw, H. Robinson, G. H. Stevenson and Howell (Aerated Waters, Cordials, &c.) Wells, G. Wright, J., and Co.</p> <p>BOTANIC BEER Newhall and Mason</p>	<p>BOTTLES Barrett, R. H. Barnett and Foster Bratby and Hincliffe Breth's (Lim.) Brooks, Peel (Perfumers) Curle, J. A. Dunlop, Mitchell and Co. (Tubs) Harru E. A., and Co. Issacs and Co. Kilner Bros Lang, J., and Co. Maw, Son and Thompson Roth: Tanco d "W" Brand</p> <p>BRUSHES Duka, and Co. Evans, Sons and Co. (Tooth and Hair) Sherlock Bros. Sutton O., and Co. (Tooth) BUTTER COL., & C. Bis: W., and Son (Mari- gole) Johnsen and Jrgensen Oldfield, Pattison and Co. Tomlinson and Hayward</p> <p>CAMPFOL Howards and Sons Keene and Ashwell (Homeo- May and Baker (patent) Maw, Son and Thompson Murray, Sir James, (patent)</p>
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Burroughs, Wellcome and Co.
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Macfarlan, J. F., and Co.
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NEPENTHE

Ferris and Co.

NIGHT LIGHT, & C.

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Gregory, W. (Devonshire Oil)
Prunk, Davis and Co.
Vogeler, The Charles, Co.
(St. Jacob's Oil) (Oil Fat)
Warren, A. and J. (Oil Oil)

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Cheesebrough (Vaseline)
De Pass, S. A. & Co. (Lime)
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OPTICIANS

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PAINTS (Oils.)**PAPAIN FINLER**

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PARALDEHYE

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Atkinson (Infant Prey)
Becham (Pills)
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Burgess, E. (Lion Ointment)
Crouch, F. B. (Wafers)
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Edwards and Son
Evans, Leach (Wiley's Counter Adjunct Coated Pills, &c.)
Fenning's (Powders)
Holloway (Pills and &c.)
Hop Bitters Co.
Kemp, W. H. (Whoolen)
Lalor (Phosphoryde),
Lincoln (Clarke's Mill)
Lacock, Dr. (Wafers)
Lynch and Co.
May, Roberts and Co.
Merces, L.
Munday, J. (Injection)
Newbery and Sons
Ratti and Co. (Morphine)
Richter, Dr. (Pain Ejector)
Roberts Foreign
Savars
Singleton's Eye Ointment
Soul, W. H., and Co.
Thompson, Millard Co.
Vogeler, The Charles, Co.
Wilson, W.
(Toothache Pellets)

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Fenning's (Powders)
Holloway (Pills and &c.)
Hop Bitters Co.
Kemp, W. H. (Whoolen)
Lalor (Phosphoryde),
Lincoln (Clarke's Mill)
Lacock, Dr. (Wafers)
Lynch and Co.
May, Roberts and Co.
Merces, L.
Munday, J. (Injection)
Newbery and Sons
Ratti and Co. (Morphine)
Richter, Dr. (Pain Ejector)
Roberts Foreign
Savars
Singleton's Eye Ointment
Soul, W. H., and Co.
Thompson, Millard Co.
Vogeler, The Charles, Co.
Wilson, W.
(Toothache Pellets)

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Atkinson, J., and Co.
Birmingham, E. R.
Becknell, Turner and Co.
British Hygienic Co.
Burroughs, Wellcome and Co.
Cheesebrough Manufacturing Co.
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De Pass & Co. (Peppermint)
Durrant, Geo.
Evans, Sons and Co.
Ewen (Soaps)
Hall's Wood Violet
Greenhill, T. S., and Co.
(Mona Bouquet)
Mack, H.
Mann, C. A., and Co.
Maw, Son and Thompson
Newbery and Sons
Pear's Soap (Dirty Bit)
Royal Perfumery Co.
Savarsbury, S. (Lav. Water)
Sanger and Sons
Shirley, A. W.
Stearns, G. & G. (Parae)
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West, T. (Olell's Mo)
Whitaker & Grossmitt
Woolley, Sons and Co. (Powder)

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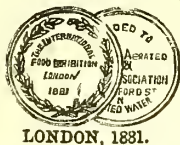
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USE

LIEBIG COMPANY'S EXTRACT OF MEAT.

Ask for the **COMPANY'S** Extract, and see
that it bears Justus von Liebig's **SIGNATURE**
IN **BLUE INK** across the Label.

ONLY PRIZE MEDAL,



LONDON, 1881.

THE

CHEMISTS'

AERATED & MINERAL WATERS ASSOCIATION, LD.

LONDON.

HARROGATE.

BRISTOL.

This being the ONLY Company that supplies EXCLUSIVELY TO CHEMISTS and HOSPITALS manufactured Mineral Waters of the highest class, and of specified formulæ, the Directors trust to be favoured with an order for Samples from those Chemists who have not yet joined the Association, the members of which now number more than 1,600. Dividend declared 1887, 7½ per cent.

Carbonated Water	} At per dozen BOTTLES SYPHONS	Lemonade	} At per dozen BOTTLES SYPHONS
Soda Water, 5 grains to ½ pint		Ginger Ale	
„ B.P., 15 „ „		„ Beer	
Pot. Water, 5 „ „		„ Lime Juice	
„ B.P., 15 „ „	1/ 1/6	Lithia Water	} 1/6 2/6
Seltzer Water		Iron and Quinine	
		Mineral Acid	

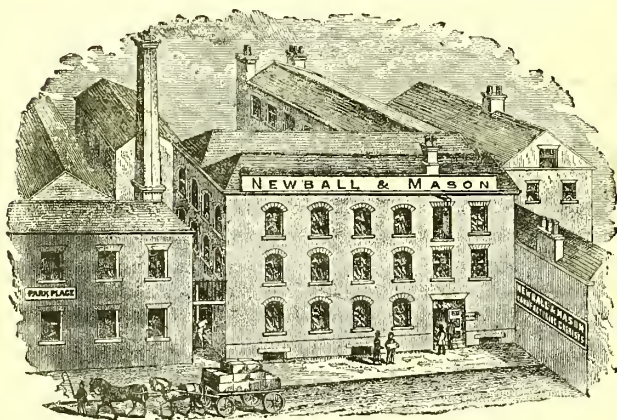
Bottles at 1/6 per doz.; Syphons, 24/; Cases, 3 doz., 3/6; 4 doz., 4/6; 6 doz., 5/6; Syphon Cases at 2/6

Sparkling Rubine... .. } At 2/6 per dozen in pint Champagne Bottles.
Zoedone... .. } Bottles included.

3d. per dozen charged for carriage on Syphons in London.

NON-INTOXICATING BEER

PRODUCED AT A SMALL COST AND LITTLE TROUBLE.
ONE TABLESPOONFUL MAKES A GALLON.



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EXTRACT OR ESSENCE OF HERBS

(REGISTERED).

Composed of Yarrow, Dandelion, Comfrey, & Hound.

FOR THE SPEEDY PRODUCTION OF

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This invaluable preparation is carefully compounded from the above well-known Herbs. Notwithstanding so many imitations, it stands unrivalled for the production of a most delicious, wholesome, and non-intoxicating beverage, full of body and flavour, and a rich cream head like bottled ale.

INVENTORS AND MANUFACTURERS—

NEWBALL & MASON, Chemists,
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WHOLESALE AGENTS.—LONDON—Sanger & Sons, Barclay & Sons, Edwards & Sons, Newbery & Sons, Hovenden & Sons, Sutton & Co., LIVERPOOL—Evans, Sons & Co.; J. Thompson & Co., LEEDS—Goodall, Backhouse & Co.

COLONIAL AGENTS WANTED.

BEWARE OF OTHERS WHO PRINT
BEWARE Copies of our Labels.
BEWARE OF OTHERS USING the same
words in order to deceive.
BEWARE OF CHEAP FOREIGN
PRODUCE.

MASON'S IS A SPECIAL COMPOUND,
AND THE ORIGINAL PREPARATION.

ALL OTHERS ARE IMITATIONS.

Sold in Bottles, 6d., 1s., 2s., 5s., and 20s. each.

Is not Affected by Climate or Weather.

Prices, Circulars, Show Cards, &c., on application.

HAY'S HOP ALE ESSENCE

REGISTERED TRADE MARK.

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

Is made from the Choicest Hops Grown.

HAY HOP ALE ESSENCE

"Supplies an excellent
stomach, appetising, and
agreeable summer drink."

Brewers' Journal.

"A beautiful es-
sence, as a fine Hop
Arom and is quite a
pharmaceutical triumph."

The Chemist and Druggist.

"For this Essence a bril-
liant fame may be antici-
pated. It possesses charac-
teristics very seldom to be
met with."

Mineral Water Trade Review.

"For its strength, and
real solubility, this Essence
leaves nothing to be desired."

British Colonial Druggist.

TRADE MARK



REGISTERED.

HAY'S HOP ALE

"This is an excellent Non-
Alcoholic beverage."

The Lancet.

"Evolves a delicious aroma
of Hops."

Medical Press.

"It is a Fine Bitter
Beer, pouring out with a
rich creamy head."

British & Colonial Druggist.

"Possesses the Aromatic
bouquet and pleasant flavour
of the genuine Hop."

Mineral Water Trade Review.

"Is a nearer approach to
Bass or Allsopp's Ale than
any non-intoxicants preced-
ing it."

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Trade Price, 8s. 6d. per lb.; 12 lbs. and upwards, 8s.

Quantity required, two fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S HOP ALE ESSENCE

FOR THE MANUFACTURE OF THE FINEST AERATED HOP ALE.

"Since Mr. HAY, the well-known Manufacturing Chemist, of Hull, surprised the Pharmaceutical world, some ten years since, by the production of
hat, until then, had been thought an impossibility, viz., a perfectly soluble and transparent **ESSENCE OF GINGER**, nothing he has done
has attracted so much attention in this direction as his latest **ESSENCE OF HOPS**, which, like his other Essences, is a production unique
in itself. The **HOP ALE** made from this Essence evolves a **DELICIOUS AROMA OF HOPS**, and supplies that much longed-for
desideratum of abstainers, 'A Glass of Non-Alcoholic Beer.' We have always felt that teetotallers laboured under a disadvantage that ought not to
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come, and affords us much pleasure to commend this truly Temperance Drink to the notice of abstainers and non-alcoholic abstainers alike."

—Medical Press.

HAY'S HOP ALE ESSENCE [1]

"It is certainly remarkable for the purity and reality of its results. Made from the choicest hops, and treated in a manner of which Mr. HAY appears
to possess a monopoly, this **HOP ALE ESSENCE** supplies an excellent stomachic, and an agreeable stimulating Summer Drink. The
HOP ALE produced by this **ESSENCE** is of a most refreshing and invigorating character, with all the appetising flavour and delicate aroma
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taken up as a speciality for which a large consumption may safely be predicted."—*Brewers' Journal.*

**W. HAY, Manufacturing Chemist, Beverley Road, HULL,
ENGLAND.**

JEWSBURY & BROWN'S (MANCHESTER) SPARKLING TABLE WATERS, UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
SELTZER WATER.
POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC
GINGER BEER.
HOREHOUND BEER.

EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

FRANCIS JONES, F.R.S.E., F.C.S.

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

LOUIS SIEBOLD, F.I.C., F.C.S.

"The Lemonade is, for flavour and general excellence, superior to any other compound which I have examined, and contains no acid but Citric Acid."

"I took a sample of the water used in your manufactory, in the preparation of the Aerated Waters, and found it, as was the case with the completed compounds, entirely free from lead, copper, or any injurious matter whatever."

C. ESTOURET, F.C.S., M.I.

J. & B.'s Syphons are mounted with PURE BLOCK TIN, thus ensuring absolute immunity from dangerous metallic contamination.

113 MARKET STREET, and 44 DOWNING STREET, MANCHESTER.

PRIZE MEDAL

ESTABLISHED 1812.



HEALTH
EXHIBITION.

POTTER & CLARKE,



Registered Trade Mark

WHOLESALE AND EXPORT BOTANIC DRUGGIST,
75 WESTON STREET, LONDON, S.E.

SPECIALITIES—

POTTER'S HERB BEER EXTRACT

For the production of a splendid Botanic Beer, with a good colour, flavour, and body, and a creamy head like bottled beer. The demand for this article last year was exceedingly large, and the demand this year bids fair to be still larger. All Chemists will find it a profitable article of sale.

Price 1/ per lb. Special quotations for quantity. In 6d. Bottles, 3/6 per dozen.

Supplies of printed matter sent with all 6d. Bottles. Will keep good in any climate.

FLUID EXTRACTS. NEW REMEDIES. MEDICINAL HERBS IN PACKETS.

Price Lists on application.

Telegraphic Address—"HOREHOUND, LONDON."

FOREIGN INDENTS RECEIVE OUR SPECIAL ATTENTION.

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IDRIS & CO.

Pure Mineral Water Manufacturers, ASCHAM STREET, LONDON, N.W.

IDRIS & CO. are at all times prepared to offer the same terms, and *greater advantages* than, any of the so-called Co-operative Associations. Their Mineral Waters are now supplied to a much greater extent and *more exclusively* to Chemists and Hospitals than those of any other Mineral Water firm or Association in London.

Being Chemists, they are practically acquainted with the requirements of the trade and give their *personal attention* to every detail connected with their business.

Write for terms and compare prices, **INCLUDING** delivery.

PURE LIME JUICE (**"IDRIS" BRAND**).

THE Juice is the first **CLEAR** pressings of **SELECTED FRUIT** in specially-designed wooden presses, prepared according to our instructions, at the "Wall House Estate," Dominica, B.W.I., and will be found of a delicious fruity flavour, without the slightest mustiness or bitterness, and fully 25 per cent. stronger in Citric Acid than the usual brands of Lime Juice.

Samples sent free, with quotations for quantities and regular supplies.

IDRIS & COMPANY,

Sole Importers and Agents,
ASCHAM STREET, LONDON, N.W.

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W. J. BUSH & CO.

MANUFACTURING CHEMISTS,
The ONLY Distillers and Importers of ABSOLUTELY PURE

ESSENTIAL OILS AND

CONCENTRATED FRUIT ESSENCES

And the Inventors of

SOLUBLE ESSENCES,

FOR AERATED WATER AND CORDIAL MANUFACTURERS.

W. J. BUSH & CO.'S "SPECIALITY," ESSENCE LEMON

Which is of superior flavour and double the strength of ordinary commercial qualities.

SOLUBLE ESSENCE OF JAMAICA GINGER

THE FINEST, STRONGEST, AND CHEAPEST IN THE TRADE.

SOLUBLE ESS. LEMON

ESS. BELFAST GINGER ALE.

FRENCH

GUM

Exposition Universal, Paris, 1878.



CREAM

EXTRACT.

PROTECTED BY ROYAL

MEDAILLE D'ARGENT.

LETTERS PATENT.

For producing a permanent head of creamy richness upon all kinds of Syrups, Mineral Waters, Cyders, beers, Ales, Wines, and all other liquids or beverages where a frothy foam or head is required. (2)

PROCEEDINGS WILL BE TAKEN AGAINST ANY INFRINGEMENT OF THIS PATENT.

ARTILLERY LANE, BISHOPSGATE STREET, LONDON

Digestion and Diet.

Random Fallacies.

It is an old and popular notion that while carbohydrates and fats are heat-givers, albumens are tissue formers only, whereas albumens are also heat-givers.

It is generally stated that starch is digested in the mouth only, albumen in the stomach, and everything in the intestine. "It is important to know that the effect produced by saliva persists in the stomach for a period of from half an hour to two hours. But it ceases altogether, and starch will no longer be changed into grape-sugar inside the stomach, as soon as the secretion of hydrochloric acid has begun in the digestive process" (Jacobi).

It is sometimes averred that fats are not digested in the stomach, whereas the splitting of a certain amount into fatty acids there, enables the alkaline juices the more readily to throw the entire mass into an emulsion in the intestine beyond. (The advantage of the Kepler Solution is that it imposes little work on digestion.)

That cod-liver oil will build up when little food is given, besides, is a great mistake. It will never build up the requisite amount of albumen is withheld. A great point with the Kepler Solution is that it is two fold instead of one.

To prescribe pepsin without an acid is useless, as the ferment is then inactive. The stomach is oftener deficient in acid than in pepsin. Hence the superior value of Pepsin Tabloids (Fairchild).

The notion that an alkali and water added to milk in any way diminish its curdling is devoid of truth. There are but two processes for radically treating cows' milk as respects the curd—the one mechanical, such as adding to the milk a soluble material like the Kepler Malt, and the other consists in digesting the milk, as with the Zymine Peptonising Powders (Fairchild).

Very few would now assert that it is natural for an infant's stomach to digest cows' milk plain.

That young infants may occasionally thrive on starchy food with milk, is not because the starchy food is digested, but simply and solely because it renders the tough curd somewhat crumbly.

A student of physiological chemistry now believes that the ordinary modes of making beef-tea extract the nutriment of the meat; to do this Zymine or Pure Pepsin (Fairchild) is requisite.

To hold that gruels will sustain life as long or as well as albumens is of course erroneous. Frequently in the case, too, that a really sick person cannot digest gruel. Where gruels are to be given to invalids, they should have some Malt Extract or Zymine added to them. The diastase in these preparations will digest the starch.

It is difficult to understand why every oil should be taken with the meals except cod-liver oil.

"As a rule small children receive water only as they get it in their milk or milk food. . . . There are normal products of digestion capable of disturbances in the digestive process, chief among which is peptone itself, which is not absorbed unless it be greatly diluted" (Jacobi).

"Cows' milk and vegetables both contain more potassium than sodium, and neither ought to be given to the well or sick, without the addition of table-salt" (Ibid).

A pregnant error:—That partially peptonised foods give rise to obsolescence of the digestive functions, and that vegetable food is more digestible than meat.

That moderate quantities of water inhibit the secretion of pepsin and hydrochloric acid is not a fact. Goodly quantities of water are often necessary to increase such secretion.

Sugar of Milk is pronounced by authorities to undergo conversion into lactic acid very rapidly, while malt-sugar and cane-sugar are not so easily transformed. Hence the directions to add milk-sugar instead of Malt Extract (Kepler) to milk for infants is a mistake, as the children thrive infinitely better on the food containing maltose.

The first inference that condensed milks were excellent artificial infant foods was dissipated by the discovery that they were followed by rickets. Condensed milk (which usually contains cane-sugar) has little in common with milk and Malt Extract (Kepler). The danger of rickets from feeding infants on starchy foods seems no longer a matter open to any doubt.

It is a popular notion that sugar is bad for young children. "In that form of constipation of small infants which depends on a relative absence of sugar and superabundance of casein in the breast milk, the addition of sugar acts very favourably." A little Kepler Malt "will often prove all that is required to regulate the bowels."

Most infant foods contain too little fat. The reason of this is, that the presence of considerable fat renders the artificial food less preservable. Hence it is that in wasting diseases the Kepler Solution is so often the very best food that can be given. A certain amount of fat is digested even in fevers of moderate severity, thus also in typhoid fever." On the other hand "it is easy to give too much fat" in the food of "the nursing."

Peptonised beef-tea is indicated towards the end of the first year, "indeed at any time during infancy in cases of early rhachitis, rhachitcal constipation, undue adiposity, and retarded teething."

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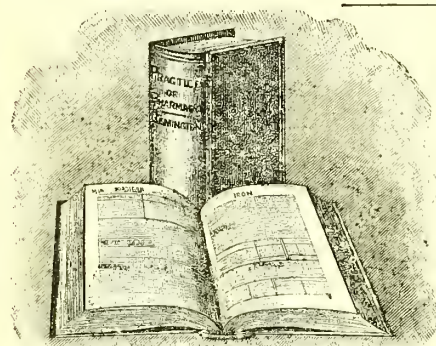
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BRANCH OFFICE:

NORMANBY CHAMBERS, MELBOURNE.

Published every Saturday.

Subscription 10s. per year, payable in advance; dating from the commencement of any month.

Post to every country in the world. Single copies, 4d. each.

Supplied only to persons connected with the Trade.

For Australian subscribers the subsidiary journal THE CHEMIST AND DRUGGIST OF AUSTRALASIA is included.

Literary Contents.

PAGE	PAGE
Bankruptcy Reports	437
Board of Trade Returns	501
Capsules	496
Correspondence:—	
The Pharmacy Bill	502
Branches	503
Doctors' and Chemists' Prescriptions	
The Pharmaceutical Society; Retail Co-operative; Treating Black Eyes; Washing Chamomiles	504
Dispensing Notes	504
Legal Quips	506
Miscellaneous Inquiries	506
Deaths	430
Editorial Notes:—	
Trade and Taxation	490
Alcoholism	491
The Book of a Century	493
French Pharmaceutical News	479
Gazette	439
Leaderettes	494
Literary Notes	495
Marriages	430
Metropolitan Reports	473
New Companies	488
Notes of Novelties	480
Parliamentary Report	476
Personalities	488
Pharmaceutical Society of Great Britain:—	
Evening Meeting	481
Preliminary Examination	483
North British Branch	484
Pharmaceutical Society of Ireland	485
Practical Notes and Formulae	497
Provincial Reports	478
Trade Marks Applied for	489
Trade Notes	489
Trade Report:—	
London	498
American Markets	500
German Markets	501

POST-CARD COMPETITION, 1888. No. 4.

The following are the candidates for the Pharmaceutical Council in May:—

C. B. A.	R. Hampson	G. F. Schacht
S. R. Atis	W. Hills	C. Symes
A. Bott	N. H. Martin	J. Watt
G. Evans	A. Nichol	G. S. V. Wills
T. P. Gilling	J. G. F. Richardson	
T. Green	J. Robbins	

We ask competitors, during the month of April, to name those who they suppose will be the first three as they will come out in the election. We do not ask for figures, but we wish to have on post-cards three names selected from the above list, giving in due order the probable first, second, and third.

Competitors may be subscribers, or their families, or employed, but no competitor may, on this occasion, make more than one prediction.

We shall only admit post-cards; and we shall refuse to take in post-cards when we are surcharged for them. Competitors must therefore be careful to avoid any writing except the address on the address side of the post-card, such as, for instance, "Post-card competition," &c.

If more than one card should give the names of the first three in the right order, we shall not regard ourselves as bound to give a guinea to each, but shall divide the award as we think proper; but if no one names the three in the right order we shall give the guinea to the one who gets nearest to the correct result.

The Chemist and Druggist of Australasia.

MARCH 1, 1888.

CONTENTS OF No. 3, Vol. 3.

Editorial articles on "Paregoric and the Sale of Poisons in New South Wales," "The Accounts of the Pharmaceutical Society of Australasia."

COLONIAL REPORTS.

New South Wales.—Pharmacy Board, Official Report—Pharmaceutical Society—Prosecutions under the Sale and Use of Poisons Act.

New Zealand.—Pharmacy Board of New Zealand and Midland Pharmaceutical Association Official Reports.

Queensland.—Pharmaceutical Society: Report of Council Meeting—Prosecution under the Medical Act—Personalities.

Tasmania.—Hobart Chemists' Association and Launceston Pharmaceutical Association: Report of Meetings.

South Australia.—Pharmaceutical Society: Official Report.

Victoria.—Pharmaceutical Society of Australasia: Council Meeting, Annual Report and Balance Sheet.

Letters from our own correspondents in Sydney, Adelaide, Christchurch, and Hobart—Student's Corner—Trade Notes—Correspondence—Poisoning Cases—Proposed Exhibition at Dunedin—The Dentists Act of Victoria, &c., &c.

(Copies may be obtained at the London office, 42 Cannon Street, E.C., 6d. each, or the journal will be supplied to subscribers outside Australasia at 5s. per annum.)

DIARY FOR NEXT WEEK.

Secretaries of societies are requested to send early information of approaching meetings.

Monday, April 16.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Cantor Lecture. Mr. Richard Bannister, F.I.C., F.C.S., on "Milk Supply, and Butter and Cheesemaking."

Tuesday, April 17.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Foreign and Colonial Section. W. F. Buchanan, J.P., on "A Hundred Years' Progress in New South Wales."

Royal Institution, at 3 P.M. Mr. Charles Waldstein, Ph.D., on "John Ruskin."

Wednesday, April 18.

Society of Arts, John Street, Adelphi, London, W.C., at 8 P.M. Ordinary meeting. Sir Howard Grubb, F.R.S., on "Telescopes for Stellar Photography."

Thursday, April 19.

Chemical Society, at 8 P.M. Ballot. Messrs. W. A. Shenstone and J. T. Cundall on "Influence of Temperature on the Composition and Solubility of Hydrated Calcium Sulphate and of Calcium Hydroxide."

Chemists' Assistants' Association, 103 Great Russell Street, W.C., at 9 P.M. Mr. E. J. Millard on "Water Analysis." Royal Institution, at 3 P.M. Professor Dewar, F.R.S., on "The Chemical Arts."

Friday, April 20.

Royal Institution, at 9 P.M. Hon. Sir W. R. Grove on "Antagonism."

Saturday, April 21.

Royal Institution, at 3 P.M. Mr. Carl Armbruster on "The Later Works of Richard Wagner."

ADVERTISEMENTS of employers and assistants can be received by us up to the first post on Friday mornings, and will be inserted in the current week's issue.

PARLIAMENTARY NEWS.

THE PHARMACY BILL.

An effort was made on Friday evening (April 6) to advance this Bill a stage in the House of Commons, and to get it read a second time; but its opponents were on the alert, and, assisted by the indifference of members generally, progress was effectually prevented. It is, indeed, difficult to arouse any enthusiasm on a private members' night at the fag-end of the week, and when the subjects set down for discussion are not of burning interest the opportunity of a count out is too good to be lost. It was the misfortune of the promoters of the Pharmacy Bill to bring their measure on on such an occasion, and, inasmuch as it only wanted half an hour to midnight when it was reached, the first note of opposition nearly emptied the House, and busybodies were quickly at work immediately the count was called to prevent their more industrious colleagues making the quorum of "forty members." The result of these tactics was the premature shortening of the debate, and once again has the Bill been thrown back on the tender mercies of "chance."

The proceedings of Friday night last are not worthy the name of debate, because the debate proper was nipped in the bud; but what occurred is duly recorded in the following lines:—

On the motion for the second reading of the Pharmacy Acts Amendment Bill, which was made by Dr. Farquharson, Mr. J. R. Kelly (the Conservative member for North Camberwell), whose earlier sentences were drowned by the noise caused by the general stampede of members, said:—I had hoped, Mr. Speaker, that those who are responsible for this Bill might have known that the opposition to it has in no wise abated. If it became the law of the land, the result would be that chemists' assistants will be entirely deprived of all chance of becoming chemists and druggists. By this Bill he is placed—

Mr. T. P. O'Connor: I rise to order. I wish to call your attention to the fact that there are not forty members present.

The Speaker (without hesitation): The hon. member is inaccurate. I think there are forty members in the House.

Mr. T. P. O'Connor (politely): I think *not*, Mr. Speaker.

After this interchange of courtesies, which was listened to by the House with some amusement,

Mr. Kelly continued: This Bill simply places the unfortunate chemists' assistants, bound hand and foot, in the power of an irresponsible body called the Pharmaceutical Society, and that Society will have the power to say that no man shall become a chemist and druggist unless he attends certain lectures, pays their fees, and gets their certificate. I myself think it would be of great advantage that chemists' assistants should be better instructed, providing that there was any real ground of complaint that they were not fully capable of carrying out their duties. But is that so? Look at the nature of the examination they are called upon to pass. I have very high authority for saying this, for the Government Inspector of Examinations under the Pharmacy Act (Dr. Hedlam Greenhow) in his annual report to the Privy Council has again and again stated that the examination as at present conducted is a sufficient guarantee that the candidates who pass may with perfect safety be permitted to practice as chemists and druggists, and that no additional expense should be imposed on the candidate.

Mr. T. P. O'Connor: I beg again, sir, to draw your attention to the fact that there are not forty members in the House.

The Speaker thereupon ordered strangers to withdraw. The sand-glass was turned. There was an exodus of several

members into the lobby, and some of these used their influence to prevent a quorum being made. Their efforts were successful. At the expiration of the allotted ten minutes the Speaker counted, and, there not being forty members present, declared the House adjourned.

Although it is to be regretted that the friends of the Bill did not muster in stronger force, it may be pointed out that, even had a quorum been made, the opposition could easily have talked the Bill out.

The Bill has twice since appeared in the orders of the day, but it now stands adjourned till Monday. Its chances of then being reached are infinitesimal.

MEXICAN PULQUE.—In the House of Commons Monday, Dr. Cameron asked the Secretary to the Treasury whether the Commissioners of Inland Revenue had ordered an importer of Mexican pulque in Edinburgh to take out a wine and spirit licence as a condition of his being allowed to retail that beverage; whether he would explain under what provisions of the law the demand had been made; whether the alcoholic strength of koumiss was equal or superior to that of pulque; and whether any wine and spirit licence had ever been required in the case of persons retailing koumiss in London.

Mr. Jackson: The Board of Inland Revenue have notified to an importer of Mexican pulque that this alcoholic beverage can only be sold by the holder of a spirit licence. A sample of the pulque in question was found to contain over 10 per cent. of proof spirit; it was accordingly charged by the Customs with spirit duty, and it can only be sold by the holder of a spirit licence. The alcoholic strength of koumiss is considerably less than that of pulque. No person retailing koumiss in London has ever been required to take out a spirit licence.

Dr. Cameron asked what was the *minimum* limit of alcoholic strength necessary to bring a liquor within the wine and spirit licence.

Mr. Jackson said he could not answer the question without notice.

THE SHOP HOURS REGULATION ACT, 1886. On Monday, Mr. Maple asked the Secretary for the Home Department, with reference to the working of the Shop Hours Regulation Act, 1886, which sets forth that no young persons under the age of eighteen shall be employed longer than seven-and-a-half hours in the week, including meal times, what was the number of convictions under this Act within the metropolitan area to March 31, 1888.

Mr. Stuart-Wortley: From a return I have received from the Metropolitan Police Courts, it appears that four convictions have been obtained under this Act—three at Marylebone, and one at Lambeth.

Sir J. Lubbock asked whether it was not the fact that certain trade societies had issued circulars to their members advising them to comply with the law; and that in many cases, when shopkeepers were employing boys and girls over seventy-four hours in the week, it had been found sufficient to call their attention to the matter, and no legal proceedings had been necessary.

Mr. Stuart-Wortley said he had no doubt that that was the case, but he had not had time to ascertain the facts from independent sources.

QUININE PILLS.—A correspondent of the *Lancet* calls attention to the necessity of careful selection of pills excipients for quinine. One patient to whom he was administering the quinine was none the better for it, and he found that the pills had actually been voided by the patient "substantially the same as when swallowed." The dispenser explained that the pills were freshly made with tragacanth paste and coated with French chalk. To this excipient the correspondent attributes the insolubility of the pills, and it is just possible that he is right, although the coating may have something to do with it. Nevertheless, the use of tragacanth as an excipient for quinine pills is unnecessary as long as so effective an excipient as sulphuric acid is in the field.

Metropolitan Reports.

ALLEGED EMBEZZLEMENT.—At the Westminster Police Court, on Tuesday, George Wyatt, 26, chemist's assistant, of Hindon Street, Pimlico, was charged on a warrant before Mr. D'Eyncourt, with embezzling the moneys of his late employer, Mr. Frank Cecil Fernando, homœopathic chemist, 33 Victoria Buildings, Pimlico. There was a further charge of stealing property of the value of 50s., belonging to Mr. Fernando. The prosecutor alleged that Wyatt was some yrs in his service, and that after he left in February last yr he discovered defalcations, money that he (Wyatt) had received for articles sold in the shop, not having been entered in the cash book. The total alleged embezzlement was 150l. When Wyatt was arrested by Detective-sergeant M'Gowan several articles of small value, including a seal engraved with a crest, a homœopathic globule case, nineteen brass letters, & claimed by Mr. Fernando, were found at his lodgings. The defendant said the letters were given to him.—Mr. D'Eyncourt remanded Wyatt, and refused bail for the present.

LEGISLATION CONCERNING THE POLLUTION OF AIR AND WATER.—At the Society of Arts, on Wednesday last, Mr. Alfred Fletcher, F.C.S., F.I.C., H.M.'s Chief Inspector under the Alkali, &c., Works Regulation Act, read a very interesting paper under the above title. The recital commenced with the year 1316, when we are told that King Edward II., to prevent the pollution of the air by smoke, prohibited the use of coal altogether. So trenchant a suppression of noxious vapours as this was never repeated. In the present day we prefer to submit to a limited amount of them rather than forego the use of the articles which result from our manifold manufacturing industry. Mention was made of the hurtful gases thrown off during the preparation of chemicals used in the bleaching of cotton and wool, the preparation of paper, the dyeing of cloths, the smelting of metals, and many other such operations. Many of these noxious gases are only known to those who reside in the manufacturing districts. Great efforts are made to restrain their emission. In 1816 the first Act was passed compelling the condensation of the hydrochloric acid liable to be thrown off from alkali works. This was followed by a second Alkali Act in 1874, and a third in 1881. Several other chemical trades are placed within the scope of this last Act. In all, 1,060 works are referred under it. The method of working the Act by means of a chief inspector and district inspectors was described, and the success attending their work referred to. The manufacturers, at first alarmed, now welcome the inspectors as being an assistance to them; a help in saving material which, though valuable, caused great nuisance when allowed to escape. The nuisance arising from black smoke was dealt with, and shown to be in nearly all cases curable. Less than thirteen Acts of Parliament were mentioned, dating from 1845 onward, in which the emission of black smoke is prohibited under heavy penalties. Yet the offence is continued. The reason why the law is so sparingly enforced is because its administration is in the hands of the local authorities, who themselves are often chief offenders. The smoke from private houses was also referred to, and a method of heating described which would increase the comfort of our homes and wholly prevent smoke. Reference was made to the thermometer of Mr. Hargreaves and Mr. Mott's gas producer, both being arrangements by which the combustion of coal was effected without causing smoke. In 1881 a Rivers Pollution Prevention Act was passed. That Act has been inoperative from the reason that its working is left in local hands. Some weak points in it were pointed out. If slightly modified and placed in the hands of an inspector and district inspectors, a like success might be expected as has attended the working of the Alkali Act.

PANAS, a French authority, is of opinion that erythrophine has a positive anæsthetic effect which lasts longer than cocaine, but it causes such violent pain and inflammation when applied to the eye that it is positively objectionable. This looks as if erythrophine acts by creating a pain which quite overwhelms that created by the operation.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor, will much oblige.

BIRMINGHAM.

ROBBERY FROM A CHEMIST'S SHOP.—At the Birmingham Police Court on Monday, before Mr. Kynnersley (stipendiary) and Mr. J. T. Bunce, James Cunningham (30), labourer, and Arthur Holcrow (34), filer, were charged with housebreaking at the business premises of Charles Packwood, chemist, 14 Summer Lane. The shop was broken into on Sunday night, a boy being put through the scullery window, which was smashed for the purpose. Among the articles stolen were bottles of perfume, some tablets of scented soap, a number of coins, a dozen ivory combs, and about a gross of spectacles, the whole being valued at 7l. On Monday morning the prisoner Holcrow offered the spectacles for sale at the shop of Mr. Dallorzo, dealer, Edmund Street. As Miss Dallorzo had been apprised of the theft by the police, she sent for a constable and the man was taken into custody. The other man was subsequently found to have been concerned in the robbery. Prisoners were committed for trial.

BRIGHOUSE.

A FIRE, which at one time assumed alarming proportions, took place in Mrs. Chappell's chemist's shop at Bradford Road, last week. Cause, the usual one. A pan of an oleaceous mixture was placed upon a gas stove, and allowed to take care of itself. The contents became ignited, and speedily travelled, carrying with it the flames, which some kind neighbours put out while the assistant went for the fire-brigade.

CARDIFF.

DOCTORS AND POISON-BOTTLES SHOULD BE BETTER ACQUAINTED.—At Cardiff, on Saturday, an inquest was held on the body of Mr. F. W. Ralfe, 50, a coal-merchant, who died on the Thursday morning previous, after having swallowed, in error for a dose of a mixture, a quantity of a liniment containing aconite. The bottles containing the liniment and mixture were standing together, and similar in shape. Mr. Ralfe was a martyr to rheumatism, and while suffering great pain got up at 2 A.M. to take the dose from which he died. Mr. W. W. Leigh, M.R.C.S., of Glyn Bargoed, Mr. Ralfe's medical attendant, was one of the witnesses at the inquiry, and deposed that he had attended and treated Mr. Ralfe immediately before his death. He had supplied him with medicine and the liniment three years ago—on March 24, 1885. The liniment contained aconite, the writing upon the label being his. The two bottles were on the chest of drawers, and the colour of both medicine and liniment was nearly the same. The coroner remarked that it was a great pity that some kind of blue-ribbed bottles had not been used for holding poisons. Mr. Leigh, in reply to the coroner, said: The bottles were compelled to mark "Poison," and the bottle, which was an 8 oz one, was sent for the liniment. The jury returned a verdict of "Death through misadventure."

DUBLIN.

THE DISPUTING MEDICAL BODIES.—The Royal College of Physicians of Ireland has decided not to appeal against Vice-Chancellor Chatterton's judgment holding that the Apothecaries' Hall, Dublin, is competent as a medical corporation to combine, under the Medical Act, 1886, with the College of Surgeons, for the purpose of conducting joint examinations as qualifying examiners to confer diplomas in medicine and surgery. The College of Physicians has also decided not to unite with these two bodies, as desired by the general medical council, but to continue the combination already agreed upon between itself and the College of Surgeons.

DURHAM.

REPENTANT MAGISTRATES.—At the quarterly meeting of the Durham county justices held on April 5, the report of the county analyst, Mr. W. F. K. Stock, was read. It contained a singular paragraph. Mr. Stock referred to the case of a man fined 5s. and costs by the Consett Bench for selling clove-pepper adulterated to the extent of 70 per cent. with allspice or pimento. It had been pointed out to him, however, subsequently, that the name clove-pepper was a trade synonym for pimento or allspice. He had consulted all the written authorities he could find, but not one of them gave the word clove in connection with pimento. He had written to a first-rate London house for samples of ground and unground clove-pepper, and he received allspice and pimento. Under these circumstances, he recommended that the fine and costs be refunded to the defendant. The Rev. A. D. Shafto doubted if they had any fund out of which to repay the fine and costs. The defendant should have appealed. The Chairman also thought there was no power to repay the fine and costs. He suggested that the matter should be postponed till the Consett Bench or the defendant himself made an application to the Court. This was agreed to.

GRANTHAM.

GRANTHAM HOSPITAL AND HOMŒOPATHY.—At a meeting held on Monday the house committee considered Lord Dysart's offer to give 225*l.* to complete the sum of 350*l.* for the enlargement of the Grantham Hospital, and 100*l.* a year required for maintenance for the next ten years, on condition that a homœopathic physician be admitted on the staff of the hospital, with full power of treating patients on that system. After considerable consideration, the offer was declined on the plea that the medical staff should be resident in the town, and at present there was no homœopathic physician living in the neighbourhood. Lord Dysart replied to this that he believed he could get a homœopathic physician to reside in the borough, where he believed there was a large opening for treatment by this system.

HOYLAND (YORKS).

A STUBBORN CHEMIST.—Mr. Jos. Willey, chemist and druggist, King Street, Hoyland Nether, was charged before the magistrates sitting in Barnsley last week with refusing to quit the house of Thomas James Whitfield, the "Turf Tavern," Hoyland, on March 23. Defendant pleaded guilty. The landlord's mother said on the day named defendant went into her son's house "fresh." She ordered him out, but he refused to go. She begged of him to go a second time, but he declined. A policeman gave corroborative evidence. The chairman, in passing sentence, said defendant had been before the bench eleven times, and would now be fined 20*s.* and costs, or one month in default. The money was at once paid.

MANCHESTER.

CHARGES AGAINST AN AGENT.—At the City Police Court on Tuesday, before Mr. Headlam, stipendiary magistrate, William Daniel Holbrook, pickle, &c., manufacturer, of Corn Exchange Chambers, Hanging Ditch, was charged with embezzling sums of money amounting altogether to 911*l.*, the moneys of the Birmingham Vinegar Brewery Company (Limited), and with falsifying his accounts. Mr. Hockin prosecuted, and the defendant was represented by Mr. W. Cobbett. In opening the case Mr. Hockin stated that six specific cases would be brought before the Court, in each of which they alleged that the defendant had received money for which he had omitted to account. The defendant had been in the service of the company as a traveller for a considerable number of years, and from time to time fresh arrangements were made as to the conditions under which he was to work. The last arrangement was made in May, 1886, and it would be found in the agreement then entered into that the defendant was engaged as a traveller and commission agent. He was to devote the whole of his time to the service of the company, and was prohibited from entering into any transactions with other companies, or deriving any profit from any other business. He was stationed at Manchester,

and the district over which he had to travel comprised Lancashire and Yorkshire, and parts of Cheshire and Derbyshire. He was to collect accounts and forward the amount per banker's draft, to the offices of the company in Birmingham, Cheques or bills he was to send on. He had also to furnish the company with weekly cash-sheets showing every penny he had received during the week preceding the day on which he sent them. Circumstances occurred which led to investigations, and it was alleged that the defendant was found to be deficient in his accounts to the extent of 911*l.* After witnesses had been examined and cross-examined in reference to the specific charge alleged, Mr. Cobbett submitted that there was no case whatever against his client. Nothing had been proved to show that the defendant had been a servant of the company. Mr. Headlam agreed that this was so. Mr. Hockin said he could prove that the defendant had received money from different persons for goods supplied by the company. Mr. Headlam: They are not denying the payments. Mr. Cobbett: Certainly not; we admit the payments. After a number of witnesses had been called to prove the payment of different sums to the defendant on behalf of the company, Mr. Headlam again expressed the opinion that under the agreement there was no case against the defendant. In all the clauses except the one relating to the taking of other agencies by the defendant the words "shall" or "shall not" were used, but in that clause the word "will" was substituted for "shall." Mr. Hockin said he would like to call the manager, and also to argue the point. Mr. Cobbett reminded the Bench that in a letter of August 31 the manager of the company construed the agreement, and said that it was owing to its being an agency that the insurance companies would not grant a policy. Mr. Hockin stated that as he had to leave for London in the course of the afternoon he would apply for an adjournment, and eventually the further hearing of the case was postponed until Thursday, April 19. The defendant was allowed bail.

SHEFFIELD.

THE borough analyst has reported that he had received no samples during the past three months. He presumes that the extreme occupation of the inspectors in other directions has prevented the samples of margarine, which have been arranged for, being sent.

A STARTLING DISCOVERY, according to a writer in a local paper, has been made by Mr. H. O. Arnold, analytical chemist, who read a paper on Thursday evening on a subject which is of great local interest. "Mr. Arnold," says the writer, "will first deal with the subject of lead-poisoning by means of water, and will then endeavour to show that there is a force at work in water of the existence of which few persons have any idea. This force, according to Mr. Arnold, is of a highly explosive character, and is regulated by the operation of a law, the suspension of which, if only for a single instant, would lead to the direst of dire results, for there would be an explosion in comparison with which dynamite would be nowhere."

THE ASSAULT ON MR. FOX.—At the Quarter Sessions on April 6, Thomas Oxley and Benjamin Lambert, both described as travellers and betting men, were charged with unlawfully assaulting Mr. Alfred Russell Fox, chemist, Snig Hill. The case, the particulars of which have already been given in this journal, excited a great amount of interest, and hundreds of people were unable to obtain admission to the court. Evidence in support of the charge having been given, and counsel on both sides having done their best, the jury found both prisoners guilty. Oxley was sentenced to two months' and Lambert to one month's hard labour, also to pay the prosecutor's costs. This sentence is considered by many to be inadequate, and is causing considerable comment in the town. An informal meeting of Mr. Fox's sympathisers was held at the "Three Travellers" Inn on Monday evening. J. M. Furness was voted to the chair, and in the course of a long speech said that the dreadful sufferings which Mr. Fox had endured in consequence of the brutal treatment he received had not yet terminated, and Mr. Fox would at the end of his days the marks of the treatment. He considered that the Recorder (Mr. Lockwood) ought to know that the people of Sheffield did not feel that he had done his part in preserving the peace of the town. The meeting

o resolutions, one sympathising with Mr. Fox and thanking n for his action in bringing his assailants before the order, and the other expressing dissatisfaction at the tences passed by the Recorder. It was also agreed to call ublic meeting to further consider the matter.

SCOTLAND.

ABERDEEN.

N ineffectual attempt was made by burglars to enter the sp of Mr. Henderson, chemist, Post Office, Auchmull, on April 5.

MR. WM. DAVIDSON has purchased the premises which bnged to and were occupied by his late firm (Davidson & S.), and is now to carry on the business in his own name a for his own behoof.

ALLOA.

NTITLED TO HIS TURN.—At a meeting of the Parochial B d last week, an application was made by Mr. William Rertson, chemist and druggist, for the supply of the medi- ci required by the Parochial Board for the paupers under the care. The applicant stated that he understood other chists in the town had been given the contract turn at, and he considered he was also entitled to his turn. Th Inspector said there had formerly been only two chists in the town, but there were now several others. It waegreed to grant the application, and give Mr. Robertson th contract for the year from May, 1888, to May, 1889. The Chirman (Mr. William Bailey): What does the bill come to in e year? The Inspector: About 15*l.* or 16*l.* The Chairma: As much as that! There must be about 10*l.* or 12*l.* p on that. (Laughter.) I am not joking. It is a well- kn fact that the percentage of chemists is 75 per cent. at st. (Renewed laughter.)

EDINBURGH.

J. T. HALL, who has been for several years with Mr. J. Pottage, Princes Street, has taken a homœopathic buess in Bournemouth.

W. S. TURNBULL, manager of Messrs. J. F. Macfarlan & S retail shop in North Bridge, is about to open a shop on own account in Hawick.

GLASGOW.

COLOLATE CHEWING-GUM.—On Tuesday, before Sheriff Balr, two confectioners were charged with having sold a swe neat called chocolate chewing-gum which was adulterate. Both parties pleaded guilty. Mr. Wm. Kidd Smith, who appeared for the respondents, stated that the gum was sold's obtained from the manufacturers in Lincoln. The con tion had its origin in America, but in this case it was mix with a substance which could not properly be called gum ut had a noxious taste. The respondents stated that it w bought by children for the purpose of chewing and themaking crackers. At the request of the sheriff, Dr. Russell explained that the substance complained of wou not make crackers. There was nearly 42 per cent. of para wax in it; and, as the matter was insoluble, it wou not combine with any of the fluids, and was a foreign body in the stomach. It might so irritate the stomach as to cse convulsions in the case of children of tender years. The sheriff imposed a penalty in each case of 3*l.*

SOCIETY OF CHEMICAL INDUSTRY.—The sixth meeting of th Glasgow and Scottish section was held on Tuesday nigh in the rooms, 207 Bath Street, Glasgow, Mr. J. J. Coleman presiding. There was a very small attendance. Dr. Clark read a paper on the "Estimation of Phosphor Acid by means of Nitrate of Silver." The paper dealt with the subject in regard to manures. Professor E. J. Hills, F.R.S., read a paper on the "Photo-Chemical Estimation of Graded Tint." A disc of dyed cloth is photograpl, and by ascertaining the quantity of the silver salt "sed up," so to speak, in the bromo-gelatine paper of corre sponding size, a formula can be deduced to give the amou of colouring matter in the cloth. The subject is new. The annual general meeting was held after the scientific part of th proceedings had been disposed of. The following officers were elected:—Chairman, Mr. J. J. Coleman; Vice airman, Mr. R. R. Tatlock. Sir J. N. Cuthbertson

and Mr. E. C. C. Stanford were elected honorary vice-chairmen; Mr. W. J. Chrystal, hon. treasurer; and Mr. G. G. Henderson, hon. secretary. A supply of saccharine was provided for those who cared to try it in the tea-room after the meeting. This is a progression which should have been imitated by the North British Branch.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

THE BUDGET OF THE PARIS ASSISTANCE PUBLIQUE for the current year has been established at 40,877,900*f.*—a snug sum, no doubt. But the Board have under their care all the city hospitals and asylums, besides the Central Pharmacy, outdoor relief, and all sorts of charitable institutions.

TRYING TO GET ADVERTISEMENTS.—The *Bulletin de la Société de Pharmacie du Sud-Ouest*, published at Toulouse, in its last number issues a notice to its readers, earnestly requesting them to invite all their purveyors to advertise in the society's organ. The pharmacists are reminded that by so doing they will increase the society's income, while the wholesalers are sure to thus extend their business. They are further informed that the terms of advertisements are to be found on another page of the *Bulletin*.

TRAGIC DEATH OF A LADY STUDENT.—Mlle. Delbage, a Roumanian, matriculated in the Faculty of Medicine, has just died at the Necker Hospital from charbon. She was living in the Bièvre quarter, not far from the little river which now harbours beavers no longer, but quantities of tanneries. A few days since Mlle. D. had her nether lip bitten by a fly, probably fresh from one of the exotic hides known to be thus frequently poisonous. In two days her head had swollen out of all shape, and notwithstanding the best treatment, on the third day she was dead.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCES have just concluded at Oran a very successful meeting. From the treasurer's report it appears that the income for 1887 was, in round figures, 92,000*f.*, of which 69,000*f.* were the product of annual dues, and 22,000*f.* the interest on invested capital. The chief expenses were 27,000*f.* for management, 36,000*f.* for printing of reports, &c., and only 2,218*f.* for the last annual meeting at Toulouse. The grants to members for investigations of all sorts amounted to 17,000*f.*, leaving a surplus for the current year of 8,000*f.* The capital fund on December 31, 1887, was 514,000*f.*—a comfortable sum to fall back upon when times are hard.

THE FIGHT AGAINST ANTIPYRINE.—At a meeting of the council of the General Association of French Pharmacists, held on March 12, M. Marsault moved that the association follow the example of the Seine Pharmacists' Society, and pledge to M. Petit their moral and pecuniary support in his fight against the antipyrine monopoly. But M. Petit, who is president of the association, remarked that his position as chief officer of the society prevented him from accepting such a proposition; whereupon the council decided that, while they could not favour M. Marsault's motion, they unanimously agreed with his opinion.

SELF-POISONINGS.—A pharmacist, M. X——, formerly established at Havre, committed suicide last Sunday, in a hotel on the Rue Montmartre, by swallowing several grammes of morphine acetate. Business reverses are said to have been the cause. A fourteen-year-old boy, Eugène B——, tried on the same day to poison himself with cyanide of potassium, for reasons at present not given. He was taken to the St. Louis Hospital in a dangerous condition, but he may recover. In both cases the procurement of the poison is readily accounted for. A pharmacist of course can easily obtain morphine; the boy was apprenticed to a jeweller, and probably found a way of getting some of the cyanide used in the technical operations of his trade.

HERBALISTS' EXAMINATIONS.—The library of the College of Pharmacy last Monday morning (April 9) offered a novel sight. The librarian's desk had been removed, and at a table M. Madoulé, the secretary of the College, sat presiding over the written examination of candidates for the diploma of *herboriste* of the first class. In his duty he was assisted by

an inspector and an inspectress of the Paris primary schools. The *impetrants*, to the number of forty, of both sexes, but females largely predominating, were at the regular reading tables, while ushers walked about handing out paper and seeing that no cheating was practised. The interests of the library were looked after by G. Marty, the man of all work, who kept watch over the precious volumes. But his vigilance was only *pro forma*, as the candidates, poor things, were too deeply absorbed in their tasks to pay attention to anything else. And yet the examination, a preliminary one, is not very difficult, the regulations limiting it to a dictation of twenty lines, and two problems involving a thorough knowledge of the metrical system and the four rules of arithmetic and proportions. It may be here remarked that while French spelling is a very intricate affair, problems in the metrical system are exceedingly simple in comparison with the British weights and measures. The dictation, taken from a passage on Jeanne d'Arc by Michelet, offered no real difficulty. It would have been easy to select such a piece that none of the candidates could have escaped making more than the five fatal spelling mistakes entailing rejection. But such is not the law's intent. As it was, nineteen of the applicants were unsuccessful at the written part, among whom were some old men and women, who persevere coming up year after year, paying the fees, and failing at the preliminary examination. In the afternoon the twenty-one successful candidates passed the oral examination, consisting in the recognition of plants, answering questions on their medicinal properties, modes of drying and preservation, &c. In this part, the herbalist's business proper, the applicants showed great proficiency, and although the results cannot be known for a week or two, they are considered likely to all obtain the diploma. As a rule it seldom happens that more than one or two fail on the last examination. The degree of herbalist of the first class confers on the graduates the right to sell throughout the French Republic all non-poisonous indigenous herbs and a good many simple drugs. Most of them, however, also manage to deal in medicaments and medical compounds, greatly to the detriment and chagrin of pharmacists whom they undersell; but they have a strong popular backing, which has so far preserved them from threatened suppression.

Notes of Nobelties.

HAY'S ORANGE BITTERS.

In his aerated orange bitters, Mr. Wm. Hay, of Hull, again manifests his chemical skill in presenting in an unimpaired form the most delicate of fruit flavours. The bitter in this case is but very slightly perceptible, but the orange flavour is imparted to a bright sparkling beverage in such purity and freshness that we should predict for the combination a rapid popularity if it should be offered by aerated-water vendors. We presume Mr. Hay will as usual supply his essence to other makers.

BAILEY'S RUBBER BATH-BRUSH.

As a means of promoting circulation and encouraging the healthy action of the skin, a combination of friction and the bath is of the first importance. The rubber flesh-brush of American origin, introduced into this country by C. J. Bailey & Co. of Snow Hill, is made out of a solid piece of rubber and is so arranged that by adjusting a long strap it can be applied to any part of the body, and is an excellent appliance for this easily-applied form of massage. Its use is quite pleasant and soothing, all tendency to irritation being avoided. The brush is supplied in a neat tin case.

DAHL'S DYSPEPSIA CAKES.

This article is an American product which is now being introduced to British consumers. The cakes are in the form of rusks, and are made with the cortical layers of various cereals, thus providing what is regarded by many dietists as the necessary supplement to our popular white bread. The

action of this bran cake is a mechanical one, and without doubt it is calculated to keep the bowels in regular action. The constituents are largely albuminous and therefore nourishing; but the cakes are recommended chiefly as natural remedies in cases of constipation and consequent dyspepsia. They form rather dry food by themselves, but can be pleasantly taken in connection with tea, cocoa, or milk.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BARRY—LEES.—On January 2, at the residence of the bride's parents, Bellary Cottage, Albury, N.S.W., by the Rev. F. Bevan, B.A., Edward David Barry, chemist, eldest son of Dr. J. B. Barry, Kilbeggan, West Meath, Ireland, and Sarah Elizabeth Lees, widow of the late John Lees, chemist, Port Pirie, South Australia, and eldest daughter of J. Paine, Esq., Town Clerk, Albury, New South Wales, Australia.

SHUKER—STEPHENS.—On April 4, at St. Maurice Parish Church, Plympton, by the Rev. H. T. Hole, rector, Charles Beddoes, chemist, &c., Ridgway, and third son of Mr. J. Shuker, of Churchstoke, Salop, to Jane (Jennie, eldest daughter of Mr. W. Stephens, St. Maurice House, Pnpton.

DEATHS.

ASHBOURNE.—Messrs. Evans, Sons & Co., of Liverpool, inform us that they have heard with regret, by cable, of their esteemed South American representative, Mr. Chas. Ashbourne, chemist and druggist, died at Rio Janiero on April 6.

BELL.—On March 16, Mr. Edward Collinson Bell, pharmaceutical chemist, High Street, Berkeley. Aged 72.

CARRINGTON.—On March 24, Mr. John William Carrington, chemist and druggist, Hall Place, Paddington, W. Aged 67.

DOLMAN.—On March 24, Mr. William Dolman, chemist and druggist, Bath Road, Cheltenham. Aged 37.

FIRMAN.—On March 26, at Exmouth, Mr. Henry Benjamin Firman, chemist and druggist, formerly of Salisbury. Aged 57.

OLDHAM.—On March 22, Mr. John Oldham, chemist and druggist, Market Street, Mansfield, Notts. Aged 78.

PRINCEP.—On February 13, at Warwick, Queensland, Mr. Philip Princep, pharmaceutical chemist. Mr. Princep was formerly secretary to the British Pharmaceutical Conference, but left England for Australia on account of his illness in the latter part of 1886. After taking for a time a position as dispenser in the hospital at Brisbane, Mr. Princep took a business at Warwick, where he died.

QUESTED.—At Westgate, near Margate, on April 3, Mr. George Quested, chemist and druggist. Mr. G. Quested was in business in the Market Place, and was well known locally and to visitors in former years. He entered the drug trade at the early age of 13 as an apprentice to his father, and showed not only great desire to master the technicalities of his calling, but found time to indulge in athletic sports, especially in walking, of which he was very fond, and there are few parts of England and Scotland which he did not traverse on foot. About three or four years ago Mr. Quested was stricken with paralysis, and has not latterly taken an active part in business.

SCAIFE.—At Pocklington, on March 30, Mr. Christopher Thomas Scaife, chemist and druggist, late of Commercial Buildings, Bridge Street, Worksop. The deceased was for a number of years carried on business as a chemist in Worksop, having previously been manager with Mr. Tom Marriot. A few weeks ago he disposed of his business in consequence of the state of his health, and it was his intention to have retired to Scarborough; but the malady from which he suffered grew suddenly worse, and he succumbed to it.

SMART.—At Norwich, on March 30, Mr. W. Smart, chemist, Bridge Street. Deceased was a very active local preacher in the Wesleyan connexion, and esteemed and respected by a large circle of friends.

Pharmaceutical Society of Great Britain.

EVENING MEETING.

The last evening meeting of the session was held at 17 Bloomsbury Square on Wednesday evening. It was a noteworthy meeting in several respects. The subject discussed was

THE PREPARATION OF PURE ETHYL NITRITE,

and by which chemists from the days of Black have endeavoured with more or less success to isolate in a state of purity, and which pharmacists of late years have hunted to the death. Messrs. Dunstan and Dymond have joined in the race, and the paper which they presented was said to be the first contribution from the research laboratory. They have solved the problem, and present their results in a form with which they consider adaptable to medicinal purposes. There are certain to be differences of opinion on that point. Dr. Reed, hearty and in his best fighting form, gave it as his opinion that the old sweet spirit of nitre improved by the official method serves its purpose sufficiently well, and he thought that a solution of pure ethyl nitrite in absolute alcohol was not only an excess of refinement but a medicine likely to defeat its own purpose, seeing that it could not be administered without undergoing the decomposition which it was intended to avoid. The practical pharmacists present were slow in expressing their opinion on the matter; but the President of the Society had made up his mind, and his support was given in favour of the "excess of refinement." As far as could be judged from the tone of the meeting and subsequent conversation, Mr. Carteighe is likely to be in a minority, not because Messrs. Dunstan and Dymond's suggestion is not good in itself, but because it is far in advance of the medical practice of the present day, and necessitates an amount of care and intelligence on the part of patients and their attendants which can scarcely be hoped for. We call attention to some practical remarks made by the curator on the quality of commercial euonymin, from which it will be seen that there is much room for improvement in this drug.

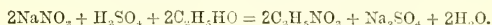
THE PAPER.

PROFESSOR DUNSTAN adopted the lecture style of address in making his communication, and said of late years the medicinal properties of spirit of nitrous ether have been more and more considered to be due to the presence of ethyl nitrite, and recognising this, the British Pharmacopœia, 1867, adopted the Redwood process, the purpose of which was to increase the proportion of ethyl nitrite in the spirit. This process was a modification of Kopp's method, and while there was no doubt that it yielded a preparation richer in ethyl nitrite than the London Pharmacopœia spirit, the new spirit had not satisfied the demand for a pure and stable preparation. The authors believed that this was due partly to the fact that the spirit is not a solution of pure ethyl nitrite. They then proceeded to describe the process of the London Pharmacopœia, in which nitric acid was made to react on alcohol with the formation of aldehyde and ethyl nitrite as the main products, there being other products formed by secondary reactions. In the British Pharmacopœia process spirit and nitric and sulphuric acids react in the presence of copper thus:—

- (1) $\text{Cu} + 3\text{HNO}_3 = \text{Cu}(\text{NO}_3)_2 + \text{HNO}_2 + \text{H}_2\text{O}$.
- (2) $\text{C}_2\text{H}_5\text{HO} + \text{HNO}_3 = \text{C}_2\text{H}_5\text{NO}_2 + \text{H}_2\text{O}$.
- (3) $\text{Cu}(\text{NO}_3)_2 + \text{H}_2\text{SO}_4 = \text{CuSO}_4 + 2\text{HNO}_3$.

But also aldehyde is formed, but in much less quantity than in the London process. The polymers of aldehyde also exist in the product. In consideration that these and other processes failed to produce a satisfactory preparation, owing to the fact that the alcohol and nitric acid are brought into direct contact, the authors determined to abandon such

methods. Various other processes are known, such as the action of silver nitrite on ethyl iodide, whereby silver iodide, ethyl nitrite, and nitro-ethane (a body isomeric with the nitrite) are formed, but this process is obviously impracticable on a manufacturing scale. The action of nitrous acid itself on well-cooled alcohol is also impracticable, but not so the direct action of nitrous acid liberated by an acid from a metallic nitrite in contact with alcohol. This was tried, and it was found to be essential for success that no heat whatever should be applied, as the chemicals interact at a very low temperature, and the application of heat only serves to decompose the product. The process recommended was as follows:—34.5 grams of commercially pure sodium nitrite are dissolved in 120 c.c. of water, and the solution cooled to 0° C. in a freezing mixture of ice and salt. There is then poured into the solution a mixture of sulphuric acid 27.5 c.c., rectified spirit 32 c.c., and water to 120 c.c. A thistle tube is used for pouring the mixture into the solution and for stirring constantly. The reaction which takes place is:—



This takes place immediately, the sulphate of soda setting, owing to the cold, into a hard mass from which the ethyl nitrite oozes out and floats on the surface. This is decanted and purified from traces of alcohol by shaking with water, the water drawn off, and the ethyl nitrite dehydrated by agitation with potassium carbonate. The proportions of chemicals given in the formula are practically the molecular proportions. There is a slight excess of sodium nitrite because the salt now in the market generally contains from 96 to 98 per cent. of real nitrite. The quantities are calculated to yield 37½ grams of ethyl nitrite, and in practice the yield varies from 30 to 35 grams of the purified article.

The next thing which the authors had to determine was the purity of the nitrite, and this was done by physical and chemical tests. As to the first, the boiling-point was found to be 17.25–17.5° C., as compared with 16° to 18° C., the figures generally given in text-books. The determination was made by two methods, viz., by observing the temperature of the vapour, and noting the temperature at which the tension of the vapour equalled the atmospheric pressure. The specific gravity of ethyl nitrite given by Liebig is .947 at 65° C.; by Brown, .940 at 15.5° C.; and by Dumas and Boullay, .900 at 0° C. The authors made careful determinations with sealed Sprengel tubes, and obtained .917 and .918 at 0° C. and .895 at 15° C., other determinations by ordinary methods giving .918 and .920 at 0° C.; .918 at zero centigrade may therefore be put down as the correct figure. Chemical methods of ascertaining impurity are not satisfactory because they are not sufficiently delicate. But working with a Bunter burette instead of an Allen's nitrometer, and using the potassium iodide method of the Pharmacopœia, it was found that two different samples gave nitrous oxide gas equivalent to 100 per cent. of ethyl nitrite, and a third sample gave a little more than that. It is evident, therefore, that the nitrite is chemically pure. The authors then proceeded to describe the properties of the body, pointing out its extreme volatility, its liability to decompose in presence of air or moisture, this liability being so marked that it was necessary to find a preservative for it, and anhydrous potassium carbonate was found to serve the purpose, no change, according to the authors, taking place in its presence. Calcium chloride decomposes it, so also does phosphoric anhydride, which are therefore unsuitable for dehydrating the nitrite. The pure ether is, owing to its peculiar properties, unsuitable for medicinal purposes. A solution of it is necessary, and a sufficiently dilute solution, say 2 per cent., was found to lose little by evaporation. It is necessary, however, to keep it in a capped bottle with a stopper, through which passes a chloride of calcium tube to absorb moisture. Various solvents were tried, and the authors corroborate the statement of Mr. John Williams that glycerine preserves ethyl nitrite.

The table given on the next page shows the condition of quasi-2-per-cent. solutions at the end of three months.

The loss with the 50 per cent. glycerine solvent is due to the fact that ethyl nitrite is but sparingly soluble in glycerine, consequently evaporates quickly. In the above cases the solutions were kept in ordinary bottles from which the stoppers were occasionally removed. The results justified the authors in recommending for medicinal use a solution of

ethyl nitrite in absolute alcohol, containing 5 per cent. of glycerine. In dispensing the solution it is extremely un-

Solvent	Ethyl Nitrite per cent.	Percentage after three months	Loss
Absolute alcohol.. ..	237	175	62
Absolute alcohol and glycerine, 5 per cent. . .	223	202	24
Absolute alcohol and glycerine, 50 per cent. .	239	179	60
S. V. R.	234	113	121
S. V. R. and glycerine, 50 per cent.	244	165	79

desirable to mix it with aqueous liquids; it should be dispensed as it is and mixed with water immediately before use.

In concluding the authors drew attention to the fact that the loss of ethyl nitrite in the solution is not attended with the formation of aldehyd and its polymers, as in the case of spirit of nitrous ether, and this statement was experimentally verified before the meeting by Schipp's and Fischer's methods.

THE DISCUSSION.

EMERITUS PROFESSOR REDWOOD was the first one called upon by the President, and in rising to speak he was received with great applause. It appears to me, said Dr. Redwood, that Professor Dunstan has met a requirement which appears to exist and has existed for some time among a certain class of medical men, who wish to treat diseases with single, pure therapeutic agents. In so far as such requirements exist, Professor Dunstan has ably and successfully placed in the hands of those gentlemen one of the agents of which a great many desire to have the opportunity of testing the action. I confess, however, that it appears to me that the difficulty is perhaps even greater than is represented. Here we find that by an excess of refinement, reproduced in a great state of purity, is a product which we have reason to believe is capable of acting in a definite manner. But when this product—extremely susceptible of change—is procured by refinement of manipulation, what do we do with it? We enter it into a sort of stop-pail (laughter), pour it into the stomach, where it meets with all sorts of things which hasten its decomposition. Unless the method of subcutaneous injection were adopted, I know not a means of applying it in that state of purity and constancy which it requires. I don't say a word against what has been done by the authors. It is not for me to speak of the probable medicinal value of the agent: that rests with the physiologist. But it appears to me that the great object in therapeutics is not so much to get the exact agent for administration, but to get the agent in a definite condition of uniformity and constitution, so that when administered the desired results will take place. I have on more occasions than one in this place said that the old sweet spirit of nitre of the London Pharmacopœia is a valuable therapeutic agent. (Applause.) It is one which I use myself when suffering in a certain direction now and then (laughter), and I find it to do me good. But, as Professor Dunstan has said, the spirit, as generally produced, is almost anything if made by the old process. All sorts of bodies were produced, including even hydrocyanic acid, and there is no possibility of altering the process without producing very variable results. When I brought forward my process, what I contemplated was uniform chemical action. No one can judge of that who has not performed the operation. If it be conducted as described in the Pharmacopœia, there is uniform, continuous chemical action, and those who conduct the process see what is going on, and feel that the product to-day is the same as that of a week ago, or a month hence. I recollect that when I read my paper and conducted the process on that table, you, Mr. President, asked me to tell you exactly what took place, what was the exact result. I said I did not know, no more do I now; but I know this, that to-day and to-morrow we get a product uniform in its nature, and that the results are what medical men, with brilliant exceptions (laughter) want. The Professor then went on to say that the process now proposed was similar to that of the British Pharmacopœia, 1864, for making sweet

spirit of nitre, in which nitrite of soda was used. It was the first to express an opinion in favour of that process but it had never succeeded, because the sodium nitrite used was not to be got at that time in a uniform condition, for it was made by fusing nitrate of soda with charcoal, and the resulting product was fearful and wonderful in its composition; but when a demand for pure nitrite of soda set up in the arts it was satisfied, and now for years past they had got pure article. Professor Dunstan had said that until now they had not been able to get pure ethyl nitrite. That was so. Mr. Williams had shown them how to make, and had made, it in that room, and gave a solution of it for medicinal purposes. (Applause).

The PRESIDENT said that it would be advisable the course of the discussion to consider what the tendencies of the paper exactly were. Professor Redwood had decided his work, which, he thought, needed no defence. Sweet spirit of nitre was a preparation of variable composition largely used. Here was a preparation of undoubted purity. Both were distinctly different. The object of therapeutists was to know what they were handling, and, as ethyl nitrite was said to be the active ingredient of sweet spirit of nitre, this definite body could now be tried. They well knew that in some cases they might as well take a glass of gin as a dose of the so-called spirit of nitre. The question which ought to be considered was, Is it ethyl nitrite that is wanted?

Mr. CHARLES EKIN confirmed the remarks made by Dr. Redwood regarding the purity of the sodium nitrite now in the market. Some years ago, he pointed out that very large quantities of it were imported into this country to be used in the production of azo colours; and, when that fact became known, he had many inquiries regarding the matter, his correspondents being desirous of getting the pure nitrite for manufacturing spirit of nitrous ether by the 1864 process, which he understood to be used by many manufacturers.

Mr. PETER MACEWAN agreed that it was desirable to say as little as possible about sweet spirit of nitre in the discussion. That was a much used preparation in which the public had confidence, and it would not be displaced by a solution of pure ethyl nitrite. The paper was a valuable one in itself, the process for preparing the ether being one of great simplicity, and original in so far as the authors entirely eliminated heat and distillation during the operation. It was stated that potassium carbonate prevented the decomposition of the pure ethyl nitrite. If that was so, how was the loss of ethyl nitrite in the solution accounted for? Was it due to evaporation, or did the carbonate act just as the bicarbonate and tartrate acted, viz., by neutralising nitrous acid as it was liberated? Another valuable point in the paper was the observation that no aldehyd was formed in the solution on keeping. That he believed was an achievement never before accomplished, and it pointed to the fact that the pure ethyl nitrite in losing strength did not undergo the decomposition which characterised spirit of nitrous ether.

Mr. DYMOND explained that the quantity of nitrite of soda used in the formula was based on a 97 per cent. nitrite. It was preferable in the reaction to use ice for cooling, that the sulphate of soda might not congeal too quickly, and so prevent the separation of the ethyl nitrite, but the temperature was not sufficiently low to prevent the formation of nitrous fumes on all occasions. For that reason a lower temperature would suit better in practice.

A student having described some experiments which he had recently made on the formation of ethyl nitrite, Mr. Williams asked what the result of mixing the solution in water, as in the course of dispensing, would be.

Professor ATTFIELD hoped that before the discussion closed practical pharmacists present would give their opinion about the pharmacy of the subject. Could this preparation be dispensed and sold without raising any practical difficulty? They would remember that the difficulties which attended the keeping and dispensing of amyl nitrite had been overcome, and he thought there would be no greater difficulty in keeping and dispensing pure ethyl nitrite. He was quite sure that Mr. MacEwan's remark about the originality of the low temperature was quite correct. It struck him that the necessity for this condition had been observed before, but it was possible that heat had been applied subsequently for distillation, and so vitiated the primary advantage. It was a good omen for the research laboratory that the first work emanating from it was of so practical a nature, and one sug-

sted that the President should communicate with the President of the British Medical Association in order to get the assistance of medical men in the physiological part of the work of the laboratory.

Mr. C. B. ALLEN, acceding to Professor Atfield's invitation, said that the subject was one which practical pharmacists could scarcely discuss, as Professor Dunstan had taken them along a purely chemical path. There was nothing about the therapeutics of the article in the paper, but he could say at now that they knew how to prepare and keep pure ethyl nitrite they would be able to introduce it to their medical friends and get them to try it.

Mr. MARTINDALE reminded the meeting that Matthew Leech, Brunton, and Murrell had experimented with pure ethyl nitrite, and were somewhat disappointed with the results. He thought it should be well understood that sweet spirit of nitre and ethyl nitrite were not the same thing, and mentioned the fact that Mr. J. Williams had supplied pure ethyl nitrite for some years.

Professor DUNSTAN then replied, and said that before he could accept definite statements regarding the therapeutic effects of sweet spirit of nitre he would require more evidence about it. He asked Professor Redwood if the name "sweet spirit of nitre" could properly be applied to "spirit of nitrous ether"? He did not question the value of the improvement that Professor Redwood had effected on the official process for making the spirit, nor did he deny that pure ethyl nitrite had been obtained before, but the processes were complicated and favoured impurity. The carbonate of potash used to preserve the nitrite acted in two ways, first by neutralising acid as it is formed, and so prevented further hydrolysis, and, second, by absorbing water which accumulates in the liquid. He could say that the Research Committee had the promise of the assistance of several eminent pharmacologists in the work of the laboratory. After some remarks on the action of amyl nitrite as compared with ethyl nitrite, Professor Dunstan concluded by thanking the meeting for their favourable reception of the paper.

The PRESIDENT, in moving the usual vote of thanks, said that Mr. Phillips, the translator of the old London Pharmacopoeia, was really the first to point out that a preparation of pure ethyl nitrite was the thing wanted, and he could say as an student of Professor Redwood's that the Professor used to teach them that ethyl nitrite was the active principle of sweet spirit of nitre, whatever he might say about it now. The paper was a good type of what research in pharmacy ought to be. Some people thought that ointments and all that sort of thing should be taken up, but no research could take place without a definite line of work such as the purely chemical provided.

THE CURATOR STATED,

in the course of his remarks on specimens which were exhibited, that a few days ago a correspondent had sent him a sample of very bright green euonymin which he believed to be adulterated with lycopodium, and on examination he found this to be the case. It contained apparently a watery extract, an alcoholic extract, some green colouring matter, and 4 per cent. of lycopodium. It has been shown that this, a solution of soda and phosphate of calcium are common adulterants of euonymin. Various specimens of the drug were exhibited, including one purchased in London this week which contained 70 per cent. of insoluble matter, apparently lycopodium. The resinoid as precipitated by pouring the extract into water is very hygroscopic, this probably being the reason for the addition of diluents. Professor Berthoud's specimen, used in the celebrated experiments on the action of certain drugs on the liver, contained only 20 per cent. of soluble matters. The idea that stem bark yields green euonymin and root bark a brown variety is erroneous. Attention was also called to varieties of acacia gum, that known as ghatti gum being considered a good substitute for the official kind.

This was all the business, and the President, having formally wound up the session, asked the members to visit the examination hall for refreshments.

PRELIMINARY EXAMINATION.

Questions given at the examination held on Tuesday, April 10.

LATIN.

(11 A.M. to 12.30 P.M.)

I. (For all Candidates.) Translate into Latin:—

1. There is no doubt that you have acted well.
2. It is true that we have been conquered.
3. My father has found the book which he lost.
4. They say the whole of Gaul was divided into three parts.
5. Having learnt these things, Caesar returns to the fleet.

II. Translate into English either A. (Caesar) or B. (Virgil).

(Candidates must not attempt both authors.)

A. CAESAR.

1. Eorum una pars, quam Gallos obtinere dictum est, initium capit a flumine Rhodano: continetur Garumna flumine, Oceano, finibus Belgarum; attingit etiam ab Segnanis et Helvetiis flumen Rhenum; vergit ad septentriones. Belgae ab extremis Galliae finibus oriuntur; pertinent ad inferiorem partem fluminis Rheni; spectant in septentrionem et orientem solem. Aquitania a Garumna flumine ad Pyrenaeos montes et eam partem Oceani, quae est ad Hispaniam, pertinet: spectat inter occasum solis et septentriones.

2. Ei legationi Ariovistus respondit: Si quid ipsi a Caesare opus esset, sese ad eum venturum fuisse; si quid ille se velit, illum ad se venire oportere. Praeterea, se neque sine exercitu in eas partes Galliae venire *audere*, quas Caesar possideret; neque exercitum sine magno comaeatu atque emolumento in unum locum contrahere *posse*; sibi autem mirum *videri*, quid in sua Gallia, quam bello vicisset, aut Caesari, aut omnino populo Romano negotii esset.

Grammatical Questions.

(For those only who take Caesar.)

1. Decline in the singular *una pars*, in the plural *extremis finibus*. (Par. 1.)
2. Write, in full, the indicative perfect and subjunctive imperfect of the verbs in italics. (Par. 2.)
3. Account for the mood of *velit* and *oportere*, and parse fully *venturum, mirum, quam*. (Par. 2.)
4. What does the Gerundive Participle signify? Name its various modes of construction.

B. VIRGIL.

1. Aeneas scopulum interea conscendit, et omnem prospectum late pelago *petit*, Anthea si quem Jactatum vento videat, Phrygiasque biremes, Aut Capyn, aut celsis in puppibus arma Calci. Navem in conspectu nullam: tres litore cervos Prospicit errantes; hos tota armenta *sequuntur*. A tergo, et longum per valles pascitur agmen. Constitit hic, arcumque manu celeresque sagittas Corripuit, fidus quae tela *gerebat* Achates: Ductoresque ipsos primum, capita alta ferentes Cornibus arboreis, sternit; tum vulgus et omnem *Miscet* agens telis nemora inter frondea turbam.
2. Quare agite, o tectis, juvenes, succedite nostris! Me quoque per multos similis fortuna labores Jactatam hac demum voluit consistere terra. Non ignara mali, miseris succurrere disco. Sic memorat, simul Aeneas in regia ducit Tecta, simul Divum templis indicit honorem.

Grammatical Questions.

(For those only who take Virgil.)

1. Decline in the singular *similis fortuna*, and in the plural *multos labores*. (Par. 2.)
2. Write, in full, the indicative perfect and subjunctive imperfect of the verbs in italics. (Par. 1.)
3. Parse fully the first line. (Par. 2.)
4. What does the Gerundive Participle signify? Name its various modes of construction.

ARITHMETIC.

(12.30 P.M. to 2 P.M.)

1. From 261 times 35 $\frac{1}{2}$ 4s. 2d. take 9,089 $\frac{1}{2}$ 5s., and divide the remainder by 89.
2. Find the value of a steel hammer weighing 225 tons, at the rate of 1 $\frac{1}{2}$ lb. for 3d.
3. From the sum of $\frac{1}{10}$, and $\frac{3}{4}$ of 1 $\frac{1}{2}$, take the sum of $\frac{1}{10}$, and $\frac{3}{4}$ of 3 $\frac{1}{2}$.
4. Add together 3 $\frac{1}{2}$ of a crown, $\frac{11}{20}$ of half-a-sovereign, $\frac{1}{4}$ of a guinea, 1,375 of a pound, and 23 of ten shillings.
5. Give the English equivalents of the *mètre* and the *kilogramme*. A person buys 6 hectol. of wine at 8d. a litre; how much water must he add to it, so that, reserving 1 $\frac{1}{2}$ hectol. of the wine for his own use, and selling the remainder at 6d. a litre, he may gain 25s. on his outlay?
6. Find the cost of papering the walls of a room 30 feet 4 inches long, 20 feet 2 inches broad, and 10 feet high, with paper 3 feet 4 inches wide at 2 $\frac{1}{2}$ d. per foot.
7. A man buys 2 tons 14 cwt. 3 qrs. 12 lbs. at the rate of 247. per cwt., and sells the whole for 1,500 $\frac{1}{2}$. How much has he gained or lost per cent. on the outlay?

ENGLISH.

(3 P.M. to 4.30 P.M.)

1. Illustrate, by examples, the adjectival and the adverbial use of *fast*, *right*, *pretty*.
2. Analyse the following sentence:—"Be thankful that your lot has fallen on times when, though there may be many evil tongues and exasperated spirits, there are none who have fire and faggot at command."
3. Parse the words in italics in the following passage:—

"When fiction rises *pleasing* to the eye,
Men will believe, *because* they love the lie;
But *Tenth* herself, if clouded with a frown,
Must have some solemn proofs to pass her *down*."

4. In the following passage supply the necessary capital letters, and put in the stops and inverted commas where requisite:—in a jacobite insurrection pendergrass would probably have been one of the foremost but he learned with horror that he was expected to bear a part in a wicked and shameful deed he found himself in one of those situations which most cruelly torture noble and sensitive natures what was he to do was he to commit a murder was he to suffer a murder which he could prevent to be committed yet was he to betray one who however culpable had loaded him with benefits perhaps it might be possible to save william without harming porter pendergrass determined to make the attempt my lord he said to portland as you value king williams life do not let him hunt to-morrow.
5. Write a short composition on *one* of the following subjects:—

- (i.) The past week of your life.
- (ii.) International Exhibitions.
- (iii.) Water.
- (iv.) "Know then thyself, presume not God to scan;
The proper study of mankind is man."

NORTH BRITISH BRANCH.

MEETING OF EXECUTIVE COMMITTEE.

ON Wednesday afternoon, April 11, a meeting of the Executive Committee of the North British Branch of the Pharmaceutical Society was held in the Society's Hall, York Place, Edinburgh, under the presidency of Mr. Henry Belyse Baildon. The other gentlemen present were Mr. Watt, Haddington; Mr. J. B. Stephenson, Edinburgh; Mr. Strachan, Aberdeen; Mr. Boa, Edinburgh; Mr. Ainslie, Edinburgh; Mr. Nisbet, Portobello; Mr. J. M. Hardie, Dundee; Mr. Kinninmont, Glasgow; and Mr. Gilmour, Edinburgh. Letters of apology for absence were received from Mr. Maben, Hawick; Mr. Mackay, Edinburgh; Mr. Daniel Frazer, Glasgow; and Mr. James Paterson, Aberdeen.

The General Purposes Committee's report was first submitted and approved, and thereafter the report of the Executive to the Council of the Society was discussed in private. On the reporters being readmitted, and it having been ex-

plained that before publication the report must be set to the Council, the Chairman moved its adoption, with the remark that it was of an exceedingly satisfactory character, the members and others having taken great advantage of the facilities offered to them by the Branch in Edinburgh.

Mr. WATT, Haddington, seconded the motion, observing that matters were progressing favourably. He hoped that the Pharmaceutical Society in Scotland would continue to do as good work as formerly.

The report was adopted.

ELECTION OF EXECUTIVE COMMITTEE.

June 20 was fixed as the date for the election of members of the Executive, the Chairman and Vice-Chairman being appointed scrutineers, with power to add to their number.

The CHAIRMAN expressed the hope that they would have on the new Council the services of their friend Mr. Watt, who at the last poll took so prominent a position.

The CHAIRMAN said this was all the business set down in their programme.

THE PHARMACY ACT AMENDMENT BILL.—UNQUALIFIED CHEMISTS.

Mr. WATT, Haddington, said that before the meeting separated he would like to call attention to the Pharmacy Act Amendment Bill, more especially as he saw Mr. Kinninmont was present. He had observed that in Glasgow there had been a strong meeting against the proposed Bill, especially in reference to its application. For himself, he looked at it as a very important measure in some respects, and although not agreeing with it altogether, yet he thought that in Scotland should petition in its favour. There was a very prominent point in it, and one which he considered would be a very great benefit to chemists; and that was the power of requiring in branches good qualified assistants. They appeared to him, so far as they were concerned, a ray of hope, because the Legislature would thereby admit the right of only qualified persons to conduct shops. If they admitted that in principle for branch shops, he did not see how they could omit it in other cases, such as limited companies and others that carried on business without having qualified persons in charge. The Legislature, he held, should in a similar manner make it imperative that all shops should be conducted by qualified persons. That was not the case at present, as they were aware, and he quite saw the force of the argument in Glasgow that the education there was so moderate that medical men could qualify almost at the same rate as under the new mode for pharmaceutical chemist or chemist and druggist. But they had peculiar facilities there which other places had not, and it would scarcely be wise to limit the operations of the Pharmacy Act because of this special feature in Glasgow. The wisest course for them as chemists in Scotland was, he thought, to petition generally in favour of this Bill. He did not know what action the Council of the Society had taken on this matter, but he would like to see the Council in any way that would help to pass this Bill. He would very much like to see that chemists were able to move, and then be able to raise a superstructure as large as they desired. The Bill as it stood was like putting the cart before the horse, but as it was submitted to the Council he was of opinion they should give it their general support. On one other point he wished to advocate, and that was he would like to see all limited companies and all firms made and compelled to disclose their partnership, and that they be authorised to employ qualified assistants to conduct their shops. If they had that they might then raise the superstructure which the Pharmacy Act attempted to do.

Mr. KINNINMONT said he was decidedly against this Pharmacy Act Amendment Bill. It simply meant for Glasgow and all like cities a great depression in legitimate trade, and they might take his word for it, its effect would be found later in Edinburgh. It would make the trade too expensive for the remuneration that was to be had in pharmacy. A medical man could give up business and attend a laboratory for one or two years, then passing as a surgeon, he could open a shop. He did not care how many shops he had, and he might have as many assistants as he liked, but he need not care whether they were qualified assistants or not.

Mr. HARDIE, Dundee, remarked that they might petition against that afterwards.

Mr. KINNINMONT said they might try how they would

that—they might as well try to stand on their heads. The result would be that the medical men were everywhere and the chemist nowhere—in fact, the latter would have no *locus standi*. In Glasgow there were three medical men for one chemist, and by-and-by there might be six—in fact, their profession was being squeezed out, owing to the competition of medical men and the competition of stores.

Mr. J. B. STEPHENSON said, instead of a ray of hope appearing in the branch business, it seemed to him to be putting the last nail into the coffin, for this reason—if they at once admitted that if they had simply a qualification to manage a shop they would see that was the very thing they were contending against just now. They might say, What was to hinder a co-operative store getting a qualified man to dispense? They said the man must be master, but that, he thought, made it a thousand times worse. Once admit the qualification itself, then what was their objection to a store?

Mr. KINNINMONT remarked that to the public that was everything. What did a man in England with only notions of sea and sugar know whether his man was qualified or not to dispense medicine? The great point was, as Mr. Stephenson said, qualification of the master. But he maintained that the man to whom the shop belonged ought to be responsible for the conduct of his business.

Mr. BILDON wished to ask Mr. Kinninmont whether he approved of the principle of one qualified chemist having one or two branches managed by unqualified persons.

Mr. KINNINMONT replied that the man was entitled to open as many branches as he pleased, and he was capable of judging whether the assistants were capable of doing right or wrong; whereas the grocer or limited liability company did not have an assistant experienced in the trade.

Mr. HARDIE: It seems to cut two ways at once.

Mr. NISBET, Portobello, agreed with the remark that there should be a qualified man in each branch establishment. Either, he was of opinion that all stores should be carried on by qualified men, and that the public should know who the qualified men were. They had a register which was published every year in which their names should appear. He went into any shop or into any of these stores to purchase sixpenny worth of laudanum, on his purchase there should appear a label with the name of a qualified man as the seller. He would also submit that the name of that qualified man should be put prominently above the shop as manager of the store; indeed, he thought that would be a deterrent to store proprietors, as they would not care to start a branch shop with a particular man's name over it.

Mr. BILDON said it was not a question of what they would like, but a question of what they could get. He did not think it was any use to expect that the principle Mr. Kinninmont had laid down, that the responsibility should be entirely with the qualified owner, and that he should be permitted to use that qualification to any extent he pleased, would ever be admitted. The weakness of their position before the public in the Law Courts whenever they appeared, when the public turned round upon them and said, "You have brought up an unqualified man for selling poisons. What do you do in your own business? Have you no branches which are managed from day to day without the presence of a qualified principal or qualified man? And how can you go against this man simply because he is not qualified?" That was the view of Sheriff Rutherford, who turned upon them in that way; and they would be in that position until they put their own house in order. It would put them in a logical position if they were able to say that they were protecting the public by having every pharmacy under the personal supervision of a qualified man.

Mr. KINNINMONT thought they should go back to the original intention of the Pharmacy Act, that the proprietor should be a qualified man, and let him employ whomsoever he pleased.

Mr. BILDON asked Mr. Kinninmont if he would be opposed to the Branch petitioning in favour of the Bill.

Mr. KINNINMONT said he was dead against it.

The meeting then adjourned, without coming to any absolute resolution on the subject.

LEAFLET OF COPPER in the proportion of half a drachm to ounce of vaseline has been found useful in the treatment of ringworm. It is applied night and morning.

Pharmaceutical Society of Ireland.

THE monthly meeting of the Council was held on Wednesday, April 4. Present—the President, Mr. J. E. Brunker, M.A., in the chair; Messrs. McCormack, Biggs, Dr. Collins, Dr. Tichborne, Messrs. Allen and Simpson.

The Council resumed from the last meeting a letter then received from Mr. J. C. Payne, of Belfast, resigning his place on the Law Committee, on the ground of inability to attend its meetings, and asking that another gentleman should be appointed in his place. The President said he had since written to Mr. Payne, requesting him to reconsider his determination, and had received a letter from him in reply, again desiring, for the reasons given in his former letter, not to remain on the Law Committee.

THE DRAFT BILL.

On the motion of Dr. Tichborne the standing orders were suspended, in order to take into consideration queries from the Parliamentary agents relative to the draft Pharmacy Amendment Bill. These were considered in committee, and the President was directed to furnish replies.

EXAMINATION REGULATIONS.

A letter dated March 22, from Sir William Kaye, Clerk of the Privy Council, enclosed an order in Council, approving of the following further regulations submitted by the Council of the Society to the Lord Lieutenant and Council on April 18 and May 5, 1887:—

I.

That any candidate who pre-ents himself for examination, and who shall receive an examination paper in due course from an examiner, shall be regarded as a rejected candidate if he does not attend the examination throughout; unless, before retiring, he shall have made the necessary numbers of marks to satisfy the examiners, or unless his absence should be occasioned by illness, verified by medical certificate, or other unavoidable cause, to the satisfaction of the Board of Examiners.

II.

That with a view to proper supervision, one member of Council, at least, should be present during examinations; and that the members of Council shall undertake this duty in rotation.

III.

That the regulations laid down for attendance on a course of practical chemistry be amended as follows:—

(a). For "such other schools as may be approved by the Council," read "such other approved schools as may, from time to time, be added to the list by this Council."

(b). For the words "been present at, at least, three-fourths of the working days of said course," read "actually worked at the bench for one hundred hours during said course."

That all certificates issued after July 1 next shall be subject to this amended regulation.

THE PRESIDENT: One of these resolutions was passed a year ago, and it was decided that the rule requiring 100 hours' work at the chemical bench should come into force on July 1 following. We are now at the commencement of the session of the schools; they have all got notice of the rule; and candidates coming up on July 1 will be expected to comply with it, unless their certificates have been signed previously to March 21 last.

A letter was received from Mr. Richard Godley, L.P.S.I., requesting that a duplicate of his certificate should be sent to him, and was postponed for full inquiry.

The name of Mr. James Tate, L.P.S.I., which had been struck off the register in consequence of his not having answered letters, was restored on payment of a fee of 1*l.* 1*s.*

There being only a bare quorum present, and some members being obliged to leave, the business could not be further proceeded with.

At the April Licence Examinations, Messrs. Burnett, Enright, Bogan, McMurray, Michie, Rice, Elliott, and Mitchell passed. Four failed.

At the April Preliminary Examination the following passed:—Messrs. Walsh, Lusk, McCartney, Gilbert, and Barrett. Six were rejected.

LIVERPOOL CHEMISTS' ASSOCIATION.

THE fortnightly meeting of the members of this Association was held in the Royal Institution, Colquitt Street, on Thursday afternoon, Mr. A. H. Samuel, President, in the chair.

The attendance was small, though the subject set down for discussion was

THE PHARMACY ACTS AMENDMENT BILL.

After some formal business had been transacted, the CHAIRMAN said, in introducing the discussion on the Bill, that he trusted they would consider the matter in as broad a spirit as possible. In legislation of any kind affecting the whole body of chemists and druggists and their assistants it would be an almost impossible task to frame an Act, or even amendments to Acts already passed, without causing some hardships. He, however, thought that, if they were animated by a sense of justice, they must all admit that Lord Milltown and others who framed and carried through the upper House the Amendment Bill which they had before them, and which had yet to pass the House of Commons, had been animated with the earnest desire not only to obtain safety for the public, but at the same time to endeavour in every way legally possible to insure all who had acquired the necessary qualifications, be they masters or assistants, the full benefit of such qualification. The Bill had naturally called forth a large amount of hostile criticism from those whose interests were more or less affected, and a good deal of correspondence of this nature had recently appeared in the scientific and trade journals. Meetings had been held in London and the provinces to discuss the Bill, and resolutions drawn up; and it was with the view of obtaining a full and free expression of opinion on the Bill from the members of their Association that that meeting had been arranged.

Dr. SYMES said the Bill had received very considerable attention at the hands of a special committee of the Pharmaceutical Council, and he had gone up to London from time to time as one of the members of that committee and discussed the details of the Bill. They had also had the assistance not only of professors of their own Society, but of gentlemen engaged in educational training outside the Society, and of gentlemen who might appear to have been competitors with their own school. Every care was taken before introducing the measure not to put undue pressure upon young men entering their calling. It was felt that the simple technical training young men got in passing their examination did not at all ensure their qualification or stamp them always with a warrant that they would be fit for the duties that would be left in their hands. A good deal of common sense was wanted to apply the knowledge possessed. The reason why young men frequently could not apply the knowledge they possessed on passing their examination was that they wasted a good deal of time beforehand, and when they had seriously to prepare for the examiners they managed to get crammed into them sufficient information, perhaps, to pass the Board of Examiners. Information gained in that way, however, left them almost as soon as it was acquired, and the result was that they did not get men of the quality which they might expect to find. To prevent this state of things it was proposed that they should establish a curriculum spread over a period of time, and then the knowledge would be acquired gradually, and it would become part of their informed minds. After the Bill passed it was not to come into operation for three clear years, so that young men in the business would have an opportunity of passing the curriculum. The object of the Bill was to benefit their own people, because the failures were nearly 50 per cent. under the present system. The Bill as brought into the House of Lords was essentially an education Bill. The new clause which had been added would bear hardly upon a number of men who had been for many years in the business, and perhaps had wives and families dependent on them; but whether anything to remove this hardship could be devised he was not prepared to say. It could not, however, be challenged on public grounds when it enacted that in every shop or branch shop there should be a qualified assistant.

Mr. PARKINSON agreed with Dr. Symes, and said the Bill was entirely in the right direction, but he hoped something would be done for the old people,

Mr. J. G. SMITH, while admitting that the Bill would be good for the public and the trade generally, thought that if passed in its present state it would be calamitous to a body of men some of whom were of long experience and conspicuous ability, men who had been long trusted by their employers, by medical men, and by the public generally, and they had a right to retain their present positions. Many of them would be quite willing to undergo a practical examination if that were allowed. He moved that the Association, whilst approving generally of the Pharmacy Acts Amendment Bill, considered that some tangible consideration should be afforded to present managers of branch shops who were not qualified chemists, but who could show by long experience and certificates of proficiency their capabilities for retaining their present position.

Mr. WARHURST seconded, and said, as an owner of branch shops, he had a number of men under him, and some with families, and they could not find money to go to college. He did not think it right or reasonable that such a Bill should have been introduced, and it would inflict terrible hardships upon a respectable body of men.

Mr. JOHN BAIN, hon. secretary, said he could hardly agree with the resolution, although he would wish to extend his sympathy to every man who had been unfortunate enough to get married. The Pharmacy Act of 1868 had been defeated by branch shops and managers, and he considered these to be the curse of the trade, and it had affected them very much. A man from Birmingham might open a branch shop in Liverpool and put a boy in it, and thus deprive a well-educated man of a living from the capital they had invested in the business. He moved, as an amendment, that the Association cordially approved of the Pharmacy Acts Amendment Bill as at present before the House of Commons, and begged to give it its best support.

After a short discussion the motion was put to the meeting, the amendment not being seconded, and it was declared to be carried unanimously. The meeting then broke up.

POISONING CASES.—An inquest was held at Great Wenham on Saturday on the body of a child 3 years old, the son of a domestic servant, who while at play found a bottle of "fly-wash" in a field and took a drink of it, dying shortly after from the effects. A shepherd deposed to leaving the bottle produced in the field in October last. It contained a fly-wash which he bought of Mr. Wright, chemist, Hadleigh. Mr. J. C. Norman, surgeon, Hadleigh, who attended the deceased, said he had made inquiries, and had come to the conclusion that death was due to poisoning by corrosive sublimate. Nothing could have saved his life. The jury returned a verdict of "Accidental death from poisoning."—Mr. J. N. Newton Barber, a veterinary surgeon, of New Mills, hired a cab at the London and North-Western Station at Stockport on Monday night, and told the cabman to drive to High Lee. The cabman did so, but on arriving at his destination found his fare was dead. Death was due to poisoning by prussic acid. At the inquest, held on Wednesday, Banks Striburne, assistant to a Stockport chemist, said that about half past three on Monday afternoon Barber purchased a 1-oz. bottle of hydrocyanic acid, saying he required it to poison some dogs. He was quite sober, and appeared cheerful.—An inquest was held at Wranby, near Brigg, on Wednesday, on the body of Charles Wharton (41), a farmer, and a heavy drinker. The evidence showed that Wharton had been marketing on Monday, and came home in an intoxicated state, and got a draught from the wife of his cousin in order to sober him. This draught was part of a mixture which had been obtained from Dr. Adair, assistant to Dr. Gilmore, of Brigg. Dr. Adair's evidence showed that too much of the mixture had been given, and also given frequently. Dr. Todd said he had made a post-mortem examination of the body, and in his opinion death was due to an overdose of chloral and opium. A verdict in accordance with the medical evidence was returned.—At Handsworth, near Birmingham, on Tuesday, a constable found a young lad lying on the road in an unconscious state, and as there was an empty bottle labelled "Carbolic Acid" by his side, the officer sought the assistance of Dr. Weston, who administered an emetic, which acted well. The lad was taken to the West Bromwich Union Infirmary, and up to Wednesday afternoon every attempt to restore consciousness had failed.

FAILURES AND BANKRUPTCY REPORTS.

LOCKWOOD & LEITH, St. Helens, Chemical Manufacturers.

At the Liverpool Bankruptcy Court on Monday, before Mr. Registrar Bellringer, William Lockwood and John Leith, trading as Lockwood & Leith, of the Boundary Road, and Par Chemical Works, St. Helens, appeared on their adjourned public examination, represented by Mr. Sparrow, instructed by Messrs. Oppenheim & Malkin. The Official Receiver said he had no further questions to ask, but he thought it right to inform the court that at the first meeting of creditors, held since the last sitting of the court, an offer of 5s. and costs, in the pound was made and carried. Since that meeting, however, another offer of 6s. and costs had been made.

T Registrar: Then I presume that the first offer of 5s. will not be accepted?

M Sparrow: As to its being a better offer, they will have to consider that.

T Official Receiver: The first meeting has been held, and the composition of 5s. was passed. We cannot hold the second meeting until the public examination has been closed.

T Registrar: Is there to be a second meeting to consider the first proposition?

T Official Receiver: No, to confirm it. The second offer has come within the last day or two. The first offer will probably fail, and the second offer be accepted. I cannot report that the 5s. is a fair and reasonable composition in the place of another offer of 6s.

M Sparrow: Is not that rather travelling out of the record? The question is now the passing of the public examination, and, as the Official Receiver has said, the second meeting cannot be held until the public examination is closed.

T Official Receiver: Still I am bound to inform the court that there is a second and better offer, and the trustee may wish to examine.

T Registrar: You may take it for granted that the first offer of 5s. will not be accepted.

M Sparrow: Except that there may be objections to the second offer. It is not so clear as might be assumed.

T Registrar: I will close it to day, Mr. Sparrow, on your application, on the presumption that there is no opposition. You do not oppose, Mr. Official Receiver?

T Official Receiver: No, I do not oppose; but of course the trustee can apply to re-open it.

T Registrar: Of course; but that involves considerable expense.

T Official Receiver: I do not think it is likely the trustee will require to re-open it, though there are some preferences, you know, sir.

T public examination was then closed.

Re F. THOMAE, Mincing Lane, Merchant.

The bankrupt in the London Bankruptcy Court on Tuesday applied to Mr. Registrar Linklater for his order of discharge. The receiving order was made in November last, and under the failure creditors have proved for 2,254*l.*, while the assets have realised 176*l.* 15*s.* 11*d.* In a recent issue of THE CHEMIST AND DRUGGIST the report of the Official Receiver on the case was published, and it will be remembered that a number of offences were alleged, including failure to keep proper books, rash and hazardous speculation (in bargaining in wheat), unjustifiable extravagance in living, the contraction of debts without reasonable or probable expectation of being able to pay them, and improper conduct by accepting certain accommodation bills on the eve of filing his petition in bankruptcy.

M Aldridge represented the Official Receiver.

At the last hearing a solicitor attended, and on behalf of two foreign creditors applied for and obtained an adjournment on the ground that it was desired to charge specific fraud. On Tuesday he did not attend, and the learned Registrar, commenting on his absence, said the Court was being treated most disrespectfully, and did he know the name of the solicitor or his clients he would order them to pay the costs of the Official Receiver and of the bankruptcy by

reason of the adjournment. He thought it was most monstrous that such a line of conduct should be pursued.

The bankrupt then proceeded to reply to the Official Receiver's report. With regard to the last allegation, he denied that the bills referred to were in any way accommodation bills. Two of them were given in the ordinary course of trade. As agent in England, he bought certain goods for foreign firms, who drew the bills. His name appeared on the bills, but as a fact his clients had sent over the money to meet them, and the vendors of the goods had been paid. When he bought the goods for the English broker, the firms on the Continent undertook to provide money to meet the usual three months' bills. The goods were sent abroad, and he had no security over them. He was simply the agent. The goods had been paid for, and the bills withdrawn. They were in the hands of the people abroad now.

The Registrar: Very well. That disposes of that charge. But it is reported that you contracted a debt of 3,176*l.* without reasonable or probable expectation of being able to pay it.

The Bankrupt: I dispute that it is a debt.

The Registrar: Where is the bill now?

Mr. Thomae: It is in the drawer's hands, and has been long overdue.

Mr. Linklater: How did you expect to be able to pay it?

Mr. Thomae: I never was to pay it except by commissions. The drawers promised never to transfer the bill to anybody else. The bill has not been proved on.

The Registrar: Very well; I suppose you have nothing to say about your previous failure, which is also alleged in the report?

The Bankrupt: No, it was twelve years ago.

The Registrar: How about your books?

The Bankrupt: I kept all the books that were required. I did not give them all up; I did not know they were required.

The Official Solicitor: You should have surrendered every book.

The Bankrupt: I have several others. My contract book shows every detail of the business. I am a German.

The Registrar: How is it in your books you treat borrowed money as capital? Could a creditor have seen it was borrowed by looking at the books?

The Bankrupt: No; but I knew it. I kept the books for my own guidance. I made out yearly balance-sheets; I did not show them to anyone. In those balance-sheets I included all debts due, although I knew some were bad.

The Registrar: How about the wheat speculations?

The Bankrupt: I was formerly in the corn trade. It was in the range of my business. My speculation proved bad; but it was not hazardous.

The Registrar: You were speculating in wheat just the same as the people do on the Stock Exchange. But for the losses you would not have been here.

The Bankrupt: They certainly contributed to my failure.

The Court: How do you justify your personal drawings having been so greatly in excess of your profits? Since 1885 you have drawn 2,320*l.*, and the profits have only been 1,100*l.*

The Bankrupt: My drawings have been at the same rate for twenty years. I could not reduce my expenditure all at once; I tried to let my house, but failed. I did not lose all hope of recovering my position. In 1879, 1880, and 1881 I was earning 2,000*l.* a year by commissions, but after that the amount fell to a few hundreds. I have kept my expenditure as low as possible.

Mr. Aldridge submitted that this was a very serious case. In the first place the previous failure was for 5,000*l.*, and only 2*s.* in the pound was paid, so that probably misery and ruin was caused to a large number of people.

The Registrar: I think it is in the bankrupt's favour that the creditors agreed to accept a composition of 2*s.* in the pound. They were not bound to do so.

Mr. Aldridge, continuing, submitted that the offence as to the failure to keep proper books was established by the bankrupt's own statement, as the real position of affairs was unintelligible to anyone except Mr. Thomae himself, it could not be admitted that the wheat speculations came within the legitimate range of the bankrupt's business, and certainly he could not have been justified in spending so much as he had done in excess of his profits.

The learned Registrar, in giving judgment, said it struck him that the most serious offence alleged against the bankrupt was the transaction with reference to accommodation bills, but Mr. Thomae had succeeded in satisfying him that he had not been guilty of the charge made. But he was bound to find that the other offences—the failure to keep proper books, the rash and hazardous speculation, the unjustifiable extravagance in living, and the previous failure—had been proved. A trader was bound to keep books which were not only intelligible to him, but from which a creditor if he examined them could ascertain the real position of affairs. It was admitted that the bad debts had never been written off, and if a merchant failed to write off debts he knew to be hopelessly bad, it could not be said that his books sufficiently disclosed his financial position. It was also admitted that borrowed money had been treated as capital, and there certainly should have been an entry in the books showing that the capital was borrowed. The time bargains in wheat were speculations of the worst possible kind, while the bankrupt ought certainly not to have gone on for three years spending twice as much as he earned. There could be no possible excuse for the offences proved, and the order of discharge would be suspended for four years.

Re G. R. BUTT, Becch Street, Barbican.

IN this case a receiving order was made on March 6, and accounts have since been filed showing unsecured debts of 10,255*l.* 8*s.* 7*d.*, and assets 270*l.* 7*s.* 6*d.* From the Official Receiver's report it appears that the debtor had failed in June, 1882, when he was trading as Butt, Child & Co., manufacturing chemists, and also as Gould & Co., furriers. His total unsecured liabilities amounted then to 65,668*l.*, and his estimated assets to 5,773*l.*, and a dividend of 4*3*/₄*d.* in the pound was paid. The debtor obtained his discharge in March, 1884, and had since traded with another partner, and also as managing director for a limited company in fur skins. He has been adjudged bankrupt.

Personalities.

DR. J. C. THRESH, one of the honorary secretaries of the Pharmaceutical Conference, has passed the first part of the final examination for the medical degree of the Victoria University with distinction in pathology.

MR. CADBURY, the head of the famous cocoa firm, has had to part with a clock for the benefit of the Rev. W. Eliot, M.A., the Vicar of Aston. Mr. Eliot's income is dependent on tithes, and he claimed 16*s.* 4*d.* from Mr. Cadbury in connection with tithe redemption in lieu of tithes for a chapel in Upper Highgate Street, belonging to Mr. Cadbury. Mr. Cadbury disputed the legality of the bailiffs coming to his residence, which was out of the parish, for a tithe due on property which was within the parish of Aston. The chief officer explained that under an old statute the goods of a Quaker can be seized for tithes wherever they are situate.

AUGUST WILHELM HOFMANN, whose seventieth birthday was celebrated in Berlin on Sunday last, was born at Giessen. His father was an architect. He had the great advantage of studying chemistry directly under Liebig, and afterwards of being engaged for some years as that chemist's assistant. In 1845 he took his doctor's degree with a treatise on the "Chemical Researches on the Organic Bases of Coal Tar." He then removed to Bonn as a private teacher, but a few months later, on the recommendation of Liebig, was appointed professor to the Royal College of Chemistry in London. This college, which was afterwards absorbed into the School of Mines, was the school of many of our modern English chemists, who all remember Hofmann as a teacher with enthusiasm. In 1862, at the request of the Prussian Government, Hofmann planned the famous laboratory at Bonn, and later on a somewhat similar one at Berlin. He was asked to accept the directorship of either, and, having accepted that of Berlin, he left England and resumed his residence in Germany in 1865. During his residence in England he was elected a Fellow of the Royal Society in 1851, received the Copley medal in 1854, and was chosen President of the

Chemical Society in 1861. He reported on the sections of the exhibitions of 1851 and 1862, and was a member of the juries of both of these and of several other exhibitions abroad. He has written numberless treatises and papers on all branches of chemical science. He led the way in the aniline investigations which have given a new industry to the world, and more than any other has contributed to an acquaintance with the formation of cyanides, phosphides, bromides, sulphides, coniine, piperidine, toluidine, and many other substances by these,



keys to modern chemistry, have been worked upon with remarkable results by Dr. Hofmann. His popularity as a teacher in Berlin is attested by his class of 400 students, who listen fascinated to his two hours' lectures. Age seems to have no effect upon him. He is as active, as energetic, as exact in his experiments as he ever was, and as well up in the latest developments of chemistry as the youngest and most enthusiastic of its teachers or students. On the occasion of his birthday the Emperor Frederick offered upon him a patent of nobility entitling him to the coveted "von" in future, and the Empress Victoria and the Queen of England sent him their portraits handsomely framed. The governing body of the German Chemical Society presented to him in the course of the day a congratulatory address, signed by Sir Frederick Abel on behalf of the chemists of Great Britain, by Signor Cannizzaro for those of Italy, and by Mr. Wolcott Gibbs in the name of the chemists of the United States, and accompanying the address were a marble bust of the Professor and a sum of 30,000 marks, to be devoted to the foundation of a Hofmann Institute. Among the subscribers to the projected institute were many Englishmen, Italians, French, and Russians, besides Germans and Austrians. Professor Hofmann likewise received a large number of congratulatory telegrams, addresses, and diplomas from scientific societies and corporations at home and abroad.

NEW COMPANIES

THE ANGLO-AMERICAN ARTIFICIAL LIMB COMPANY (LIMITED).—Capital 5,000*l.* in 5*l.* shares. Object, to acquire certain letters patent for the manufacture of artificial legs, granted to C. A. Frees, No. 15,139, and dated November 17, 1887, for the United Kingdom.

THE LIVERPOOL PHOTOGRAPHIC SUPPLY COMPANY (LIMITED).—Capital 2,000*l.* in 1*l.* shares. Object, to acquire and carry on the business of Thomas Henry, trading under the style of the Liverpool Photographic Supply Company.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds for objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." The address of the Patent Office is Southampton Buildings, London W.C.

from the "*Trade Marks Journal*," April 11, 1883.

"**COLDER LAUNDRY WASHING OIL**," and signature; for washing-liquid. By S. Hulme, Green Lane, Brook Street, Manchester. 61,952.

Signature and address of depositors; for aerated waters. By Owen & Son, the County Mineral Water Works, Newcastle. 64,585.

"**FOLINE**," and lion's head; for a remedy for hay-fever. T. G. Gibbons, pharmaceutical chemist, Manchester. 762.

"**BRYAN SALT**," and signature of depositors; for medicinal substances used as food. By F. Newbery & Sons, King Edward Street, E.C. 64,867-8.

"**ROYAL BAKER POWDER**," and other wording, on label; and Royal Baking Powder," and signature of depositors; for baking-powder. By The Royal Baking-powder Company, 6 Wall Street, New York. 66,683-4.

"**CHIMBERLIN'S CREAM BAKING-POWDER**," on label; for baking-powder. By W. G. O. Hockliffe, Chalgrove. 816.

"**ST. PATRICK'S LINIMENT**," and figure of the saint; for liniment for rheumatism. By Annie Grant, 20 Richmond Hill, Rathmines, Co. Dublin. 67,913.

"**HASLOP'S COMPOUND COUGH MIXTURE**," and other wording, on label; for cough mixture. By W. Haslop, 55 Union Street, Oldham. 68,243.

Trade name of depositor, and figure of three fishes, on label; for chemical substances (Class 1). By Hymans de Tiel, trading as Jacobus Hymans, 8 Minshull Street, Manchester. 69,074.

"**STAG'S HEAD BRAND**"; for a linoleum reviver. By J. W. Cartgill, Staghous, Bridport. 69,486.

"**TREATMENT FOR TOOTHACHE AND NEURALGIA**," and signature of the depositor, on oval label; for a medicinal preparation. By M. O'Farrell, Kildorrey, Co. Cork. 70,722.

"**LAWSON'S**," and signature; for an aerated preparation of milk. By J. M. Dowden & Co., St. Paul's Lane, Bourneouth. 70,758.

"**WOLF BRAND**," and wolf's head, on fancy label; for aerated waters. By Blood, Wolfe & Co., 66 Grafton Street, Liverpool. 71,306.

Fancy label, bearing designation of depositors, and scene representing David killing Goliath; for food, fermented liquors, and perfumery. By Cornell & Cornell, chemists, Ipswich. 71,887-9.

"**RHINO HEADACHE CURE**," and a girl's head; for a headache curative. By Hertz & Collingwood, 101 Leadenhall Street, E.C. 72,663.

Trade Notes.

MESSRS. HIGGS & THESSAN, cod-liver oil importers, have transferred their London agency to Messrs. Sutton & Co., 121, Lower Thames Street, E.C.

DR. CHARLES PARKINSON, chemist and druggist, Blackpool, has removed from Talbot Square to more commodious premises at 30 Bank Hey Street, Blackpool.

WE have received from Messrs. Bracher & Co., of Wincanton, a copy of their new illustrated price-list of mixing-machines, automatic stills, &c. This gives all particulars regarding the "Desideratum" mixers and the distilling apparatus, which has lately attracted considerable attention amongst pharmacists owing to its automatic action.

WE have received from Messrs. Bryant & May, of Fairfield Works, Bow, an illustrated catalogue of decorated, fancy, and plain tinware. The illustrations are beautifully produced in colours, and include specimens of many kinds of tin boxes especially suitable for chemists' use. This catalogue will be very interesting to those druggists who put up their own goods.

THE LIVERPOOL VINEGAR COMPANY (LIMITED) having lately announced that they had purchased from Mr. Holbrook the right to manufacture and supply Holbrook's sauce, relish, and pickles, the Birmingham Vinegar Brewery Company (Limited), who have hitherto supplied these goods, give notice by advertisement that they claim the exclusive right to manufacture them, and have commenced legal proceedings to establish that right.

MESSRS. WYLEYS & Co., of Coventry, have just issued their monthly price-list in a new form. In addition to the ordinary alphabetically arranged prices-current of drugs and chemicals, the list contains a useful enumeration of the names of fluid extracts and their uses, a complete list of the formulæ of the coated pills made by the firm, as well as other information regarding drugs and sundries which the chemist will find useful. With each list a number of order forms are stitched up, and the firm give their customers a handsome portfolio to keep these lists together.

Gazette.

PARTNERSHIPS DISSOLVED.

Cutter, W. & R. W. Ashby-de-la-Zouch, mineral water manufacturers. Hall, J., & Hepworth, S., Lindley, Huddersfield, mineral water manufacturers.

Hine & Trestrail, Freemantle, Southampton, mineral water manufacturers.

Hurst, H. F., & Macnaughton, W. A., Walker, Northumberland, surgeons.

Lucas & Leadbetter, High Wycombe, brewers and aerated water manufacturers.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Key, David Thomas, Edith Villas, West Kensington, surgeon.

Power, Henry D'Arcy, East Dulwich Road, Victoria Road, Chomert Road, Peckham, and Rye Lane, Peckham, physician and accoucheur.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Atkinson, George Fernley, Snaith, Yorkshire, physician and surgeon—first meeting April 18, Downe Arms Hotel, Snaith; public examination, May 3, Court House, Wakefield.

Buckwell, Thomas Douglas, late of Great Castle Street, Regent Street, London, trading with E. L. Cleaver, now of Burgess Hill, Sussex, late manufacturing chemist and druggist, now out of business—April 18, Official Receiver's office, Brighton; April 25, Court House, Brighton.

ADJUDICATIONS.

Key, David Thomas, Edith Villas, West Kensington, surgeon.

Warner, George, New Road, Battersea Park Road, eclectic and botanic practitioner.

NOTICE OF DIVIDEND.

Palmer, Thomas William Gascoigne, Cheltenham, dental surgeon—first and final div. of 7s. 4½d., April 17, 61 High Street, Cheltenham.

APPLICATIONS FOR DEBTORS' DISCHARGE.

Deacon, Henry Pelham, Willesden Lane, Willesden, lately practising with C. C. Dickson, surgeon—May 3, High Court of Justice in Bankruptcy.

Oakley, James, Birmingham, druggist and dyer—May 10, Birmingham.

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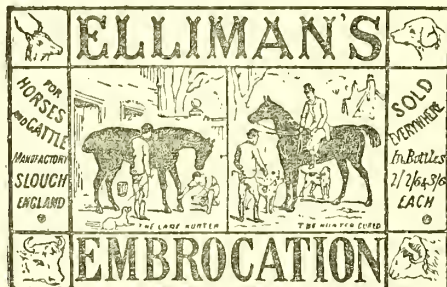
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EDITORIAL NOTES

TRADE AND TAXATION.

THE direction of public attention at this moment towards
 national and local finance by means of the Budget and the
 Local Government Bill, ought to be to the advantage of the
 community. Discussions on our own affairs in Parliament
 and in the press are likely to be much more profitable than
 any of those historic but dangerous investigations into the
 concerns of our neighbours which have too frequently been
 the prelude to vast and unremunerative expenditure.

The present Chancellor of the Exchequer has attained a
 remarkable eminence as a financier in both of the great
 parties of the State; and in the Budget just now before the
 country he has undoubtedly exhibited his power of dealing
 skilfully with a most complicated situation. On the main
 features of his proposals it would be out of place to comment
 here, but some of the minor details of his scheme are par-
 ticularly worthy of consideration and discussion by all
 interested in commerce. Under our present system of taxa-
 tion it is impossible for anyone to calculate with certainty
 how much he contributes towards the public revenue; but
 what is certain is that the bulk of all taxation is borne
 with especial force on the long-suffering trader, and that
 of all classes gets the least benefit out of the expenditure.
 The gross total of all the incomes of the United Kingdom
 assessed under all the schedules amounts now to about

630 0,000%. Of this sum about 250,000,000% are assessed under schedule D. Of this again something like half is paid on profits earned by railway and other companies, the capital of which belongs mainly to the *rentier* class. So that the incomes earned by traders, professional men, and men in employment on which this tax is paid can only be estimated at something like 125,000,000%, or, say, one-fourth of the whole assessed income. When it is further remembered that these incomes are to a great extent precarious, that they depend largely on the health and lives of the earners, and that it is these incomes which lead to and render the others possible, it does seem that they of all others have the best claim to lenient treatment in the matter of taxation. It would take too much space to show here, but we believe figures would easily bear out the statement that the trading classes are enormously over-taxed in proportion to their ability as compared with the classes above them, and perhaps as compared with the class below them. It is this consideration which makes it of essential importance that the trading classes should watch with jealousy all new taxes, and should strive more than they have hitherto done to attain more perfect representation in the legislature.

One change in taxation proposed in this year's Budget there are few which affect the trading classes especially, and none which concern chemists or druggists exclusively. The penalty on the income-tax and the anticipated reduction of rateable boons which cannot fail to be welcome wherever they are paid; but they are boons as much to the classes who derive their incomes from settled property as to those who depend for theirs on their labours from year to year. The 6% stamp on brokers' contract notes is not yet applied to other than Stock Exchange contracts; and, so far as it hits the speculators, this tax cannot be objected to. If the movement in favour of extending and systematising speculation in the produce markets should prove a success, there is not much doubt that this stamp will have to be adopted by the brokers of Mincing Lane as well as by those of Capel Court. The additional taxation of 1% per 1,000% on the nominal capital of new limited liability companies will tend also towards the control of reckless speculation, and in that aspect is satisfactory. The much discussed wheel tax is introduced with a plausible reason. It is said that those who use the roads so much should contribute specially towards their maintenance. That sounds fair; but it is probably a fallacy. The carriers, the carters, the coal-dealers, and others who will have to pay this tax work their waggons, vans, and carts in the service of the public, and particularly in the service of traders. Somehow we may be sure the tax will find its way to the last-named class, with the usual addition. The tax is a direct attack on one business and an indirect interference with all others, and as such is a bad tax; one that will do more damage than can possibly be balanced by what it will bring in to the revenue. Strong objections, too, may be urged against the bottled-wine tax. The principal reason given for this tax is perhaps worse than the tax itself. Mr. Goschen said if this tax should lead to remonstrances from the Powers, it should be remembered that our remonstrances to such Powers with regard to impositions on British goods had not been so uniformly successful as to oblige us to pay extra regard to such remonstrances at the expense of the British revenue. No one can object to champagne drinkers being smartly taxed, but we question the wisdom of commencing a retaliatory policy for such a trumpery addition to the revenue as this tax will bring in. The fair-trade policy may be a righteous and prudent one to adopt; but, if so, let it be put into operation on a reasonable scale, and with a clear apprehension of what we are doing.

The effect of taxation upon trade is perfectly astonishing. Up to 1845 a duty was charged upon foreign bacon. Immediately the duty was removed the trade in foreign bacon increased tenfold, and it is now more than a hundred times as large as it was in 1840. The movements in cheese, butter, eggs, sugar, and a host of other articles of consumption formerly dutiable, now free, tell the same tale. The hundred-times increased trade in bacon promotes our shipping trade, ensures the export, perhaps, of nails, perhaps of alkali. The bacon-dealers provide a hundred times as much employment, and buy more sugar, more tea, and more drugs. And so one trade acts and reacts upon all others. The moral of all this is that traders should get to understand their own interests, and should then present a bold front to Chancellors of the Exchequer, with a view of insisting on the one hand upon careful supervision of the expenditure, and on the other upon scientific methods of raising the revenue.

ALCOHOLOMETRY.

In a recent issue we called attention to a matter which Sir Henry Roscoe brought under the notice of the Chancellor of the Exchequer regarding the Customs system of charging duty on alcoholic liquors; and it was then stated that Sir Henry Roscoe wished a committee appointed to inquire into the value, or otherwise, of an alternative system. This system is the invention of Mr. Benjamin Derham, M.D., of Bolton, and is set forth in three pamphlets edited by him. One of these treats of the "Theory of the Hydrometer," with special reference to the determination of specific gravities without the use of tables, and the extension of the capacity without impairing the accuracy of the instrument, by means of submerged poises. The other pamphlets are tables of the alcoholic strength of spirits, one giving percentages by weight of absolute alcohol, and the other percentages by measure of proof spirit. The existence of these pamphlets, published four years ago, was known to a comparatively limited circle until Sir Henry Roscoe brought the matter under the notice of the House of Commons, and since then chemists have wanted to know more of Dr. Derham and his work in this little cultivated field of physical chemistry. The opportunity was afforded them on Monday evening, when Dr. Derham read a paper before the London section of the Society of Chemical Industry on "The Errors and Defects of the Present Revenue System of Charging the Duty on Spirits, and the Means for Remedying them."

The errors and defects of the Revenue system are these: first, an inaccurate instrument, Sikes's hydrometer, for determining the density of the liquors; and second, an incorrect set of tables for use along with this instrument. The principle of the hydrometer is well known, it being that the weight of a floating body is equal to the weight of liquid displaced. Hydrometers are, therefore, either of constant volume or of constant weight. In the case of the first kind, as in Nicholson's hydrometer, if the instrument weigh 1,000 grains the mark on the stem indicates the point to which it sinks in water, and in order to get the instrument to sink to this point in heavier liquid weights have to be added. The sum of the weights and weight of the instrument is therefore the specific gravity of the liquid. The constant-weight hydrometer records specific gravities owing to the fact that it registers the variations in displacement; and as the stem of the instrument is of small bulk in relation to the whole, it is obvious that a hydrometer of this kind is capable of indicating a limited range of densities only. Hence a series of hydrometers is generally in use. But this custom would obviously be an inconvenient one for the Excise officers. Sikes therefore designed the instrument which bears his

name, and which has been adopted by the Government of this country. This instrument is made of brass gilt; the globe has two stems, one above graduated to 10 divisions, each division being subdivided into five, and one below to receive weights, of which there are nine. The instrument is capable of indicating densities between that of water and spirit 70 degrees overproof. Obviously the instrument is a combination of the constant weight and constant volume kinds, and herein lies its inaccuracy. The graduations of the stem having a fixed relation to the bulk of the instrument, and the bulk being definitely related to the weight, it follows that when a weight or poise is added which is not so related the graduations of the stem at once become fallacious. For example, the hydrometer without the weight indicates by the scale densities from '8154 to '8323, or 16.9 degrees; the lightest weight added to the hydrometer indicates '8323 to '8495, or 17.2 degrees, so that each of the ten divisions has in the first case a value of 1.69, and in the next of 1.72, and so on with the heavier weights, the discrepancy increasing with the increased weight until, in the case of the ninth one, the value of the ten divisions on the scale is 20.7. This is the real inaccuracy of Sikes's hydrometer, and from the fact that the instrument is scientifically inaccurate Dr. Derham argues that the determinations made with it must also be inaccurate. He proposes to overcome the accuracy by making the poises

Bulk	Weight	Sp. Gr.	Bulk	Weight	Sp. Gr.
1	1.60	1.60	6	10.20	1.70
2	3.24	1.62	7	12.04	1.72
3	4.92	1.64	8	13.92	1.74
4	6.64	1.66	9		1.76
5	8.40	1.68	10	17.80	1.78

Having once determined these factors, the construction of an instrument which will carry out the principle in practice is not difficult of achievement, and Dr. Derham has produced the hydrometer shown in fig. A. It will be seen that it closely resembles Sikes's hydrometer (fig. B), but instead of the weights being carried on a rest, as in Sikes's, they are into a stirrup, and the shape of the weights is oblong. The instrument is gilt, like Sikes's, and the weights are made of aluminium, the specific gravity of which is 2.6, so that a little hollowing serves to reduce the poises to the required specific gravities. The stem of the instrument is round, whereas that of Sikes is flat.

With a scientifically accurate instrument at his disposal, Dr. Derham proceeds to attack the Revenue set of tables. As we previously stated, Sikes, in constructing his table showing the proof strengths of spirits for each degree between 30° F. and 80° F., made the assumption that spirits of different alcoholic strength bear the same relationship to proof spirit at the different temperatures as they do at 51° F., which is the standard. This is obviously wrong, for alcohol and water have unequal rates of expansion, and it follows that a weak alcohol does not expand at the same rate as a strong alcohol. The fact is not denied by the authorities, but they state that Dr. Derham's statements regarding the loss to the revenue and the trader are erroneous. These statements are based on a collection of statistics regarding the mean temperature of the parts where spirit is stored in bond. In Greenwich the mean temperature is 49.1° F., so that the Revenue mean, 51° F., is somewhat too high; but in Liverpool and Manchester it is 47° F.; in Glasgow and Edinburgh 46° F.; and in London 45° F. In all these places much spirit is stored, and it follows that when it is examined by the Revenue officers an amount of alcoholic condensation has taken place which the tables do not detect. Moreover, it happens that five-sixths of the spirits are taken out of bond during the nine months of the year, and that two-thirds of the spirit are stored in Scotland, where the mean temperature during that period is 41° F. An amount of alcoholic contraction has occurred under these conditions which represents in duty a loss to the Revenue of 50,000*l.*, assuming that 40,000,000 of 25 overproof spirit are thus dealt with. The actual loss may be more or less, but that a loss is continually going on is self-evident.

The official reply to this assertion was well put by two speakers at Monday's meeting. Firstly, it was said that the loss asserted by Dr. Derham is not the most serious that takes place. In gauging the casks containing the spirit the officers, who are not highly educated men, as a rule make errors amounting to a gallon or two of spirit per cask in favour of the consumer; and when that spirit is used for methylating purposes, having already paid duty, the owner frequently gets drawback over and beyond the duty sufficient to pay for the methylating. At one time the Revenue suffered great loss, amounting to 180,000*l.* per annum, by the obscuration of alcoholic strength in the case of such liquors as brandy and rum, which contain saccharine and other dissolved matter, but this was put right by Mr. Keble, who related the fact to the meeting. Another speaker said that most of the spirit taken out of bond was not stronger than 11 over proof, and that the mean temperature of the warehouses in London is nearer 55° F. than 46° F.

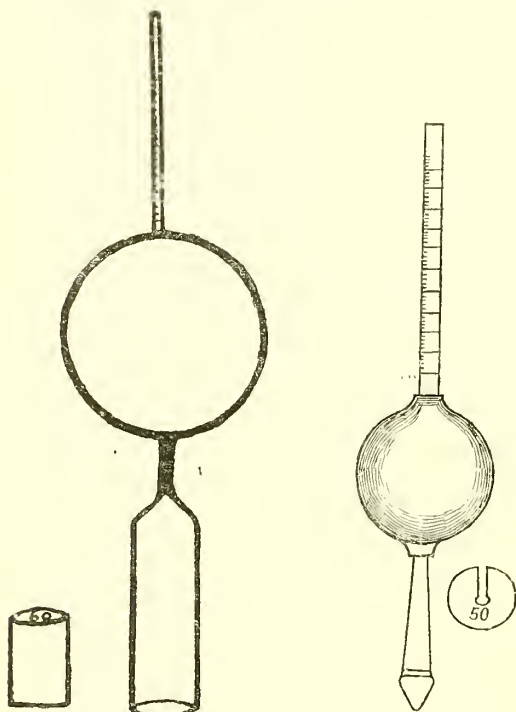


FIG. A.

FIG. B.

bear a definite relation in density to the instrument itself. The factors which control the weights and bulks of the poises are determined by very intricate mathematical formulae. Thus the bulk of the first poise is calculated, the specific gravity of the material of which it is made being of course one of the chief controlling factors. The second and subsequent poises are calculated from the bulk of the instrument plus the bulk of poise, 1, 2, or 3, as the case may be. With such calculations the following are the bulks, weights, and specific gravities of the poises, starting with an instrument which has a bulk of 40 and a weight of 31.2, indicating a density of .780:—

Derham, in replying to these and other criticisms, averred that his instrument could be made as strong as silk, and with the poises to be placed in the same manner, so long as his principle was observed. He effectively disposed of the assertions that the loss to the Revenue is very little, and held that if the loss by obscuration had been stopped, there was no reason why the loss which he pointed out could not also be stopped. There is no question, in our opinion, that the facts as stated by Dr. Derham prove that a loss does occur; this loss the consumer undoubtedly gets the benefit of, and that is against all the precedents of the Excise authorities. Why, therefore, Dr. Derham is blackballed for his discovery it is difficult to say.

THE BOOK OF A CENTURY.

The progress of chemistry during the nineteenth century has been so marvellously rapid, and so much knowledge has been added to the store during the last few decades, that it somewhat startles us when we reflect that one of the greatest modern works on the science is a relic of the last century, when modern chemistry can scarcely be said to have been born. Yet such is the case. "Watts' Dictionary of Chemistry," of which a new edition is before us,* really originated in the "Dictionary of Chemistry," compiled by William Nicholson, a book published in London in 1795 in two volumes, followed in 1808 by a revised edition in one volume. This old work is most interesting reading to the student of chemistry, who recognises the relation to present accepted theories of those old beliefs which dominated the science years before Dalton crystallised the amorphous mass of chemical truths by the enunciation of a rational atomic theory. After a dozen years Nicholson's dictionary appeared in substantially the same form, but now written by Andrew Ure, F.R.S., a Glasgow professor of chemistry, the first edition of his dictionary being dated from the city of St. Mungo, November 7, 1820, and being in one volume, as were also the second (London, 1824) and the third editions (London, 1827). A supplement to the latter volume was published in 1851, and fourth and fifth editions in 1853 and 1860, the latter being in two volumes, with the title "Dictionary of Arts, Manufactures, and Mines." For some years previous to this a distinct differentiation had become manifest in chemistry. On the one hand were the "rule of thumb" men who had helped, and nobly helped, to establish chemistry as an applied art, and on the other were those who studied it as a science, and who were extending the theories which the philosophers of the early years of the century established as the fundamental principles of chemistry. As there was a differentiation amongst the men, so there was a differentiation of their books, when in 1863 the first volume of "A Dictionary of Chemistry and the Allied Branches of other Sciences," by Henry Watts, was published as "essentially a dictionary of scientific chemistry." It was based on Ure's dictionary—did indeed contain some of the articles from that work; but chemistry as an applied art was not treated in the work except to a limited extent. This dictionary has acquired a world-wide reputation amongst English-speaking chemists; it is remarkably complete even in minor articles, and has been kept well up to date by the publication of supplements in 1877, 1878-81. By the time that the second part of the last supplement had appeared, the work had assumed unpropitious proportions, and much of the matter in the early

volumes was out of date and untrustworthy. An entirely new edition became necessary, and this Mr. Watts agreed to edit, and had actually commenced the gigantic task when death ended all his labours.

In assuming the onerous work bequeathed to them, Dr. Morley and Mr. Muir had placed before them the necessity of producing a complete and satisfactory account of the present state of chemical science in four volumes of about 760 pages each. Therefore, "the allied branches of other sciences" have had to go, and the technical chemistry of the former edition is to find a place in a companion volume to be edited by Professor Thorpe. Mr. Muir took charge of inorganic chemistry, and Dr. Morley has written or edited the articles relating to organic chemistry. They have had many assistants in the work, including some of the best known English, American, and foreign specialists.

The most noteworthy point observable on scanning the pages of the volume now published is the extreme degree of condensation which has been adopted in the articles descriptive of substances. This condensation goes as far as the contraction of common words and the omission of words necessary to make complete sentences. What, indeed, in ordinary writings is unpardonable is here developed into something like an orderly system. Four pages at the beginning of the volume are devoted to an explanation of the abbreviations. Their utility is shown in the following example, which we take from the introduction.

As written:—

Bromo-di-oxy-benzoic Acid. — $C_6H_3Br(OH)_2CO_2H$ [$x:2:6:1$]. [180°, anhydrous.] From *c*-di-oxy-benzoic acid in ether and Br (Zehenter, *M.* 2, 480). Prisms (containing aq.); v. sol. alcohol, v. sl. sol. water. $FeCl_3$ gives a violet colour to its aqueous solution.— $Ag^+aq.$ — $Ba^{++} 7\frac{1}{2} aq.$ — $KA', 1\frac{1}{2} aq.$

Expanded:—

Bromo-di-oxy-benzoic Acid. — $C_6H_3Br(OH)_2CO_2H$ [$Br:OH:OH:CO_2H=x:2:6:1$] melts at 180° after it has been deprived of its water of crystallisation. It is formed, according to Zehenter (*Monatshefte*, vol. ii. p. 480), by adding bromine to an ethereal solution of consecutive di-oxy-benzoic acid. It crystallises in prisms, and the crystals contain one molecule of water of crystallisation to each molecule of the acid. These crystals are very soluble in alcohol, but very slightly soluble in water. Ferric chloride colours its aqueous solution violet. It forms the following salts:— $C_6H_3Br(OH)_2CO_2Ag, H_2O$; $\{C_6H_3Br(OH)_2CO_2\}_2Ba, 7\frac{1}{2}H_2O$; and $C_6H_3Br(OH)_2CO_2K, 1\frac{1}{2}H_2O$.

This system of condensation is quickly mastered by the reader, and it does not, therefore, cause any appreciable inconvenience in consulting the work.

A complete review of such a book as this is obviously impossible in a single notice; meanwhile, therefore, some comments on the matter in the first volume which is more directly interesting to pharmacists may be made, and we preface these by calling attention to a few of the more important special articles in the volume. Amongst these are an exhaustive note on affinity, extending to twenty pages, contributed by Professor Ostwald, of Leipzig; a thoroughly practical note on the detection and estimation of poisonous alkaloids, by Dr. Thomas Stevenson; allotropy, very succinctly put by Dr. Lothar Meyer; analysis (inorganic), chiefly in relation to the principles which underlie the various standard methods, is described by Professor Dittmar in forty-four pages; Professor Thorpe gives an account of the atmosphere in which micro-organisms find a place; and immediately following this is an erudite essay on atomic and molecular weights by Mr. Muir, whose position as an editor has enabled him to write on several subjects, such as bismuth, which he has specially investigated. To Dr. Morley has also fallen some particularly laborious work, such as that

* *Watts' Dictionary of Chemistry*, revised and entirely re-written by H. Fors. Morley, M.A., D.Sc., and M. M. Pattison Muir, M.A. (London, 1888). Longmans, Green & Co. In four volumes, 21. 2s. each. Vol. I., "Al." to "Chemical change." 8vo. Pp. xx. + 752.

entailed by the article on azo- and di-azo-compounds, which extends to fifty-four pages, and contains references to several hundreds of articles by different chemists. The article on bacteria is contributed by Professor E. Ray Lankester, and that on blood by Dr. W. D. Halliburton. Mr. C. F. Cross contributes a monograph on cellulose, and the volume is completed by the recondite article on chemical change written by Professor J. J. Thomson, of Cambridge.

In addition to the metals and their salts between "A," and "CH" used in medicine, the volume contains lengthy articles on acetic acid and acetates, alcohol, alkaloids, ammonia, benzoic acid and benzoates, caffeine and its derivatives, and camphor, as well as short notes on a host of substances which are of interest to pharmacists. These notes are generally brief, instructive, and correct, and have numerous references attached to them. It is not surprising, however, to find an occasional slip, as, for example, under "balsam," which is said to be "now generally employed to denote any liquid resin with aromatic odour." They are composed of solid resins mixed with essential oils, and copaiba and turpentine find shelter along with true balsams under the heading. Under "ethyl acetate" no notice is taken of the exhaustive paper by Dr. Inglis Clark, which reviewed a large part of the work upon which the article in the dictionary is based, and corrected several of the physical constants of the liquid. The article on alkaloids is especially unworthy of the book, as it is not only incomplete but contains many glaring errors. For example, colchicin is included in the list, although its non-alkaloidal nature has been amply proved. "Strophantine" is included in the same list, and we find "cantharidine" under the tests for alkaloids. The alkaloids of pilocarpus are given as pilocarpine, jaborine, and pilocarpidine. The latter is generally believed to be a derivative of pilocarpine formed during extraction, just as a fourth body, jaboridine, is supposed to be a derivative of jaborine. Two mythical plants and alkaloids are given in *Gelsenium*—alkaloid gelsenine, and *Geselmitum*—alkaloid geselmine. Apparently *Gelsenium* and its alkaloid gelsenine are here meant, but why is the second alkaloid gelseminine, isolated by Thomson, not mentioned? Amongst the omissions is Rimijia bark with its alkaloids. We mention these errors because they are so apparent to the pharmacist that he might conclude that the whole character of the work is similar, and because they would never have occurred had a pharmaceutical chemist been consulted in reference to that part of chemistry in which pharmacists are proficient. To judge of the work from these isolated chapters would be to do the editors and their coadjutors a great injustice. Almost every page of the volume bears evidence of careful compilation, and any slips which have occurred in the course of condensation may be detected on referring to the sources of the data, which, we may repeat, are exceedingly numerous as well as catholic in their selection. The method of arrangement has been materially changed, and is on the whole more systematic and convenient than before. Cross references are numerous, and the explanation of terms generally lucid. A word in conclusion may be said regarding the style of the book. The type is larger, and there is greater variety of it than in the old edition, which alone makes the pages more pleasant reading, but this is enhanced by the arrangement of the matter in double columns on the page. The old edition was rather slimly bound; the new one has not this fault, a strong leather back and heavy cloth boards giving an elegant and substantial finish to what is undoubtedly a complete dictionary of chemical science.

Improving the Pharmacy Bill.

Our correspondence columns have borne witness to the greatly increased interest which has been taken in the Pharmacy Acts Amendment Bill since the introduction of the branch shop clause. Business is going along with fair rapidity in the House of Commons this session, and the probability is growing that the Bill may pass. A great many chemists who perceive the value of the new clause, but who think its principle ought to be extended, will welcome the opportunity offered to them of organising their strength by the petition which has been drawn up by Dr. Charles R. Taylor, the solicitor and secretary to the Incorporated Society of Chemists and Druggists. For some curious and wholly unexplained reason the Pharmaceutical Council, who are the authors of the Bill, branch shop clause and all, seem to have abandoned it. Their policy appears to be to let it drift—through if it will, on the rocks if it likes. This is not the feeling, however, of many of their constituents, or the trade at large, a large number of whom we have no doubt will take advantage of the offer made in our column of a copy of a petition drawn up in accordance with what seems to be the general view. The objects asked for are that we may be given to others besides the Pharmaceutical Council to prosecute infringements of the Pharmacy Acts; that exemption from jury service shall be extended to all chemists, and that the word "person" in the Pharmacy Acts shall include corporation or company in its signification. Those who are of this opinion should indicate it by applying to Dr. Taylor for a copy of the petition for signatures.

* *

Pharmaceutical Congress at Milan.

It is now reported that, contrary to previous expectations, the *Associazione Farmaceutica Lombarda* have commenced the preliminary movements for holding the seventh international Pharmaceutical Congress in Milan in September of this year. When the sixth Congress broke up in Brussels in September, 1885, it was agreed with enthusiasm that the seventh should be held in Milan three years later, and Mr. Cannizzaro of Rome promised the Congress that the *"Associazione"* just named would organise the meeting. Up to the beginning of this year we were officially informed that no steps whatever had been taken; but since then, possibly in consequence of our inquiries, the decision is now reported to have been carried out. We shall keep British chemists informed of the progress of the arrangements.

* *

Preparations of Ergot.

Ergot is unquestionably one of the most important drugs of our materia medica, a drug regarding which little suspicion as to the purity of its own action has ever been alleged, yet is notoriously the fact that the official preparations of it, especially the liquid extract, give much disappointment and frequently fail to act in the most critical cases. This is generally believed to be owing to the manner in which the liquid extract is made, the prolonged heating to which is subjected during evaporation tending to decompose the ebolic principles of the drug. There are several well-known means for retaining the full activity of the drug—as in our example, the ammoniated tincture of the Unofficial Pharmacopœia. This combination has met with great success, but it is objected to by some on account of the alkaline taste. This objection can surely not hold good in the case of an acid extract which Mr. F. S. Mahomed, of Bournemouth, proposes as an effective parturient (*Brit. Med. Jour.*). Acetic acid has a certain amount of ebolic power. This, in combination with strychnine, it brings about uterine contractions when ergot has failed. This fact suggested to Mr. Mahomed the combination of the acid with ergot, and accordingly he had prepared for him a liquid extract containing in each fluid drachm 10 minims of the acid and a soluble matter of 60 grains of ergot; another extract was made of the same strength, with rectified spirit instead of water. Both of these were found to act better than the pharmacopœial preparation. The use of acetic acid for extracting ergot is not a new suggestion, but in the form now put forward by Mr. Mahomed it seems to be well worth a trial, and those pharmacists who have close relations with physicians would do well to prepare some of the acid extract and bring it under their notice. It should be made

by percolation if possible, the menstruum used being a mixture of 1 part of acetic acid and 5 parts of water or rectified spirit.

At a recent pharmaceutical meeting of the Philadelphia College of Pharmacy Mr. Alfred B. Taylor explained a novel method for the determination of the specific gravity of liquids, which depends on the loss of weight which any solid substance suffers when weighed in a liquid. It is well known that the loss of weight is equivalent to the weight of liquid displaced by the solid. For example, if a piece of aluminium, sp. gr. 2.56, weighing 256 grains, is weighed in water, it loses 100 grains of its weight. This loss is therefore the equivalent of the specific gravity of the liquid, water being unity. If we replace the water with rectified spirit the loss is, viz., 83.8 grains, and so with other liquids, the loss of weight being in exact relation to the specific gravity of the liquid used. Any other solid than aluminium may be used, provided it is insoluble in that liquid, and for the sake of simplicity the weight taken of it should be the specific gravity in grains or grammes.

We have on several occasions commented on the ingenious methods adopted by the officials in bankruptcy calculated to reduce the value of estates which come under their charge, and which are altogether too small to fit. *Truth* this week gives an amusing instance of the skill brought to bear on this policy. Captain Sandeman, we are told, was indebted to the estate of a bankrupt named Price in the sum of 4*d*. On February 26, he received a formal document from the Official Receiver in Victoria Street requesting the payment of the 4*d*. forthwith by cheque, P. O., or P. O. O., with a further intimation that "postage stamps cannot be accepted in payment of debts." Noting disposed to travel to Victoria Street to pay the 4*d*. Captain Sandeman did nothing till March 22, when the demand was repeated by a further printed application under threat of a summons to bring the debtor before the Court. Captain Sandeman then wrote that it was impossible to draw a cheque or obtain a postal order for 4*d*. The Official Receiver replied that he would strain a point and take four stamps. The 4*d*. was accordingly remitted in stamps, and received acknowledged by another printed document. The collection of this 4*d*. consequently cost the estate precisely 4*d*. postage, not to mention further expenditure in printing, stationery, &c.

Mr. Haydon, of Birmingham, has had a round with the rulers of pharmaceutical affairs with the usual result. The whole of the correspondence has been sent to us, but we find it too lengthy for reproduction. Mr. Haydon is well known as a trade champion. If he makes a business of his championship so much the better it is more likely to be done in a workmanlike manner. In this capacity he recently had a correspondence and discussion with the authorities of the Board of Inland Revenue in reference to the taxation of Godfrey's Cordial. Mr. Haydon succeeded in rescuing poor Godfrey, not quite in undamaged condition, but very little the worse for his handling at Somerset House. Readers of this journal are familiar with the case and conclusion of that little controversy. Those who depend for their pharmaceutical enlightenment on the Pharmaceutical Society's journal have heard only the first portion of the narrative. This is their affair, not ours; it was one of Mr. Haydon's grievances. Mr. Haydon soon after undertook the defence of one of his clients at Ashton-under-Lyne in a spirit-of-nitre case. Greatly to the forensic credit of his solicitor and himself the defence was successful. We obtained a report of that case at considerable expense, but it appears from this correspondence that Mr. Haydon supplied a report to the *Pharmaceutical Journal* for love. Notwithstanding this delicate attention the editor gave only the briefest abstract of the case, and gave that "chiefly for the sake of expressing the opinion" that the defence was of a character "which ought never to be adopted." Mr. Haydon thereupon addressed the Council on the management of the *Pharmaceutical Journal*, and in reply is told by the secretary that his letters "were ordered to lie on the table."

We do not know what is the exact effect of that resolution, but we recognise its dignity, and certainly no word shall be written here in depreciation of the essential doctrine of editorial, like royal, incapacity to do wrong.

The Edinburgh and Liverpool pharmacists have been discussing the Pharmacy Bill during the week, but with singularly inconclusive results. The circumstances in which pharmacy is placed in Glasgow are peculiar, but we altogether fail to see that these render it desirable to prevent a move upwards. Surely if it can be shown that pharmacists conduct their businesses in a better manner than doctors do, this should tell in favour of the former. The Liverpool discussion was chiefly notable for the revelation which Dr. Symes made of what is probably the feeling of the Pharmaceutical Council in regard to the unqualified managers and their hardships. It would seem from his remarks as if these gentlemen may expect some sympathy in Bloomsbury Square. The advocacy of their cause, however, by a notorious branch-shop exploiter is capable of doing it as much harm as benefit.



AND

Literary Notes.

PERSONS desiring to commence bee-keeping, and who would like to get honey with as little personal inconvenience as possible, will find some useful hints in a pamphlet entitled "Successful Beekeeping," published at 3*d*. by the British Beekeepers' Stores, 6 Dionis Yard, Fenchurch Street, E.C.

WE have received a copy of the fifth edition of Dr. Prosser James's valuable work on "Laryngoscopy and Rhinoscopy in the Diagnosis and Treatment of Diseases of the Throat" (Baillière, Tindal & Cox, London). The new edition comprises much new matter and a number of new illustrations. Lithographed plates and woodcuts are a special feature of this treatise, rendering the descriptions of apparatus and conditions of the larynx much more intelligible than they could otherwise be.

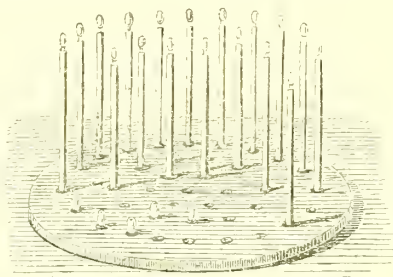
THAT popular homœopathic writer, Dr. Compton Burnett, has just published a book entitled "Fifty Reasons for being a Homœopath" (London: The Homœopathic Publishing Company). These are given professedly in reply to a mocking allopathic doctor, who certainly ought to have been convinced. The author curiously, however, does not seem to have expected to satisfy his sceptical professional friend, but evidently hopes to succeed better with those of the public who may read his book. The cases recorded are certainly marvellous enough. They cover a good selection of the more ordinary complaints, like coughs and neuralgia, and also travel into the higher regions of disease, cataract, insanity, and *angina pectoris*. With the most simple faith in Dr. Burnett's good faith and modesty, we are bound to say that the impression which this book of his conveys is that he must be something beyond the ordinary crowd even of medical men, and possessed of almost magical power to expel the demons of disease which afflict mankind.

BRITISH HIERACIA.—What promises to be a work of much importance and usefulness to botanists is at present being prepared by Mr. Frederick J. Hanbury, F.L.S. The *hieracium* genus is one which presents a great many difficulties to the botanist, especially in the separation of the species. Mr. Hanbury has been fortunate in getting a complete collection of species, and he proposes in an illustrated monograph to describe and figure them, Mrs. Hanbury and Miss G. Lister having executed the drawings. It is intended to issue the work in five-shilling quarterly parts, extending over probably about five years. The size will be imperial quarto. It is the author's intention to publish the work himself, to allow no trade discounts, and to restrict the issue to about two hundred copies. Those who wish to become subscribers should therefore communicate with the author at 69 The Common, Upper Olapton, E.

CAPSULES AND CAPSULE-MAKING.

WE owe this particular form for the administration of medicines to Mothes, who invented gelatine capsules in 1838. They afford one of the best means of administering nauseous medicines, especially liquids, and for this purpose their use has gradually extended. If it were known that a dozen capsules could be made in as short a time as is required to make a dozen suppositories, we feel sure that every pharmacist would add this branch of the pharmaceutic art to his everyday employment.

The details of the operation of capsule-making are, as will be seen from the description which follows, comparatively simple. The requisites are moulds, or olives, as the French call them. These are egg or olive shaped, solid heads of iron or britannia metal, each of which is fixed upon a metal rod; a dozen or more of the moulds are fixed into a slab of wood or cork, with perforations for the purpose, and at the back of the slab, in the centre, a handle is fixed. A good slab or holder may be made from a large cork bung. The appearance of the moulds fixed on the holder is seen in the following figure:—



The moulds are the only part of the requisite apparatus which are not home-made. A slab of wood with quarter-inch perforations bored with a centre-bit (the holder as shown for example), or even a suppository mould, serves to support the capsules in the process of filling, and most liquids are poured into the capsules by means of an ordinary glass syringe. The fifteen-minim capsule is the common size, but the size may vary from five minims to one or even two drachms. If the moulds are made locally the chemist should supply the moulder with the shape from which to work. For this purpose use clean yellow wax, fifteen grains for each fifteen-minim mould; warm the wax and form it into the proper shape, with as smooth a surface as possible. The moulder will of course make the metal mould perfectly smooth; the slightly greater bulk, proportionately, of the wax allows a fair margin for this purpose.

Capsules are either hard or soft. The former were the first introduced, but the latter are now deservedly the more popular, for they are more easily swallowed. The solution for hard capsules is made according to the following formula, although the quantity of liquid used in this and other cases must vary with the quality of the gelatine:—

Gelatine	...	...	...	Oz.
Gum acacia	...	...	...	6
Powdered sugar	...	...	...	1
Water	...	...	...	1
	...	...	...	5

Steep the gelatine in the water, when soft add the gum and sugar, and heat until dissolved, removing any scum which rises to the surface.

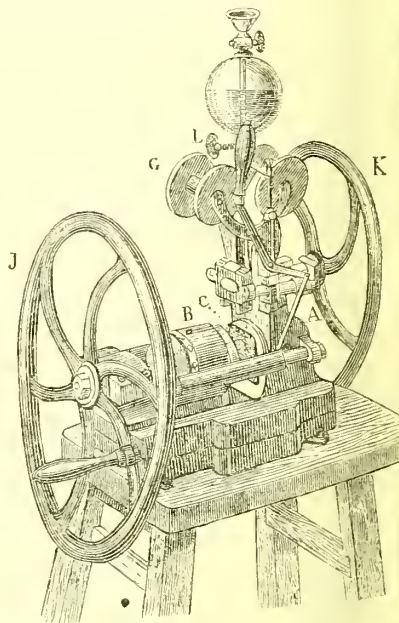
Various forms have been proposed for the soft capsules. The following have been found to give good flexible masses:—

(1)	Gelatine, gum acacia, sugar, each	Parts
	Honey	30
	Water	10
		100
Make a solution as above.		
(2)	Gelatine	Parts
	Glycerine	25
	Sugar	10
	Water	8
		45

Steep the gelatine in the water, add the sugar and glycerine, and dissolve by the heat of a water-bath.

A stock of No. 2 may be kept and dissolved as required by means of a water-bath. To make the capsules, the gelatine mixture melted and heated to 104° F.; prepare the moulds by oiling them very slightly with olive oil. This is best done by oiling a soft cloth, such as a piece of lint, and applying this over the whole of the mould surface and a little way up the supporting-rod. Lift the mould-holder by the handle and immerse the moulds completely in the gelatine mixture; in a few seconds remove steadily and begin to rotate the moulds in a circular fashion, so that the gelatine may set perfectly even. A little practice suffices to make the operator perfect in this operation. In a couple of minutes the gelatine has set sufficiently to allow the whole to be set aside. In about a quarter of an hour the capsules may be removed by grasping each lightly with the finger and thumb and gently pulling off. Place each one upon its closed end in one or other of the supporters already described, and when the whole have been removed cut off their tails with a pair of scissors. They are now ready for filling, and in the case of liquids this is simply done with a syringe; for powders use a small funnel made of paper. The open end is closed by dipping a glass rod in the liquefied gelatine solution and placing the drop which it removes upon the opening. Sometimes a superior finish is given to the capsules by afterwards dipping this end of the capsule halfway up in the gelatine solution and drying rapidly, but one must be an adept before this refinement is attempted. After they are finished it is necessary to expose the capsules to the air for a few hours, in order to dry them thoroughly.

A form of capsule which is very popular in France is the *perle*, or *globeule*. They are either spherical or flattened forms of the capsule, and are made in a different way. Viel's apparatus for making these, as perfected by Thenot, is shown in the following figure.



A is the cast-iron bed or support of the machine, resting upon a strong deal table; B, a hollow movable cylinder, has a moulding plate at its extremity corresponding to C. To these bands of a gelatinous film are conveyed from the spools G. The liquid to be capsuled is placed in the receptacle H, from which it passes to the capsule. The whole apparatus is worked by means of the wheels J, K: J forms the gelatinous moulds, and K works the apparatus which presses the film into the moulds. The gelatinous film referred to is made of Irish moss mucilage dried. The moulds turn out the capsules with edges which are subsequently made to adhere by the pressure of a part of the apparatus worked by the wheel K, and which consists essentially of a counterpart of the capsule made of steel.

Practical Notes and Formulae.

SYRUP OF TOLU.

The Swedish Pharmacopoeia prescribes the following method of preparation:—30.0 parts of balsam tolu are by degree dissolved in 100 of rectified alcohol, filtered, and poured into 2,000 parts of boiling water, and well stirred. Permitted to stand for two to three days; filter off the fluid, and without the application of heat prepare with 1,900 sugar a syrup which is perfectly clear, has a strong odour, and an agreeable taste. The syrup is rather thin, however; it would be better to use 2,500 of sugar.

NEW PRINTING PROCESS.

A new process of auto-stereotyping has been invented in Switzerland, and is described in the *Scientific American*. A plate of Paris plate is made in the ordinary manner, each 5 lbs if it containing 3 oz. of silicate of soda and 2 oz. of phosphate of lime. It is further prepared in a dark room in the following manner:—First make a solution of 5 oz. of gelatin in 12 oz. of water, taking care not to overheat; add 6 drams of citrate of iron and ammonia and 2 oz. of alcohol and stir while warm. Put into a flat dish covered to a depth of about a quarter of an inch. Warm the plaster of Paris plate, and dip in the solution on the smooth side for a moment, afterwards dry in the dark. Next prepare a transparent solution composed of—

	Oz.
Distilled water	16
Alcohol, 90°	5
Acetic acid	$\frac{1}{2}$
Phosphate of soda	$\frac{1}{4}$

The print is floated on this for two hours, care being taken to prevent the back of it being immersed. When the copying plate dry the copy is transferred to it, the plaster having been used between rubber sheets to prevent it from breaking. The plate is then dried once more and exposed to direct sunlight for fifteen minutes. When taken out, the places where the light has acted are found to be quite hard, while the other places the plaster is soft, and falls off as fine powder as deep as the solution has penetrated, if brushed with a hard brush. After that the plate is ready to be stereotyped.

CORKS.

M. USQUET, of Bordeaux, recommends as a good method of cleaning and preserving corks, the following process:—Put the corks in a steam or water bath until the mildew is removed; then, while they are hot, immerse them in a dilute solution of albumen (500 grammes dry albumen to 100 lbs water, that is, 1 lb. albumen to 133 pints of water). For albumen fish-glue may be substituted, especially when cork corks are treated. For this purpose dissolve 1,000 grammes fish-glue and the same quantity of salicylic acid in 100 lbs of hot water, and plunge the corks into it. When the war has become cold, put the corks in a solution of tannic acid, of 200 grammes tannin to 100 litres of water, and dry in gentle heat.

HECTOGRAPH SHEETS.

Soak 4 parts of best white glue in a mixture of 5 parts of water and 3 parts of solution of ammonia until the glue is soft. Warm the mixture until the glue is dissolved, and add 3 parts of granulated sugar and 8 parts of glycerine, stirring well, and letting come to the boiling-point. While hot, paint it up white blotting-paper with a broad copying-brush, until the paper is thoroughly soaked, and a thin coating remains on the surface. Allow it to dry for two or three days, and it is then ready for use. An aniline ink should be used for writing, and before transferring to the blotting-paper let the latter with a damped sponge, and allow it to stand for two minutes. Then proceed to make copies in the ordinary way. If the sheets are laid aside for two days, the ink writing sinks in, and does not require to be washed off.

CLARIFYING VISCOUS LIQUIDS.

THE filtration of solutions of peptonised substances is always a matter of considerable difficulty, and to obviate this W. Fresenius proposes the use of recently-ignited asbestos. He dilutes the solution with a considerable proportion of water, and then incorporates with the mixture a small quantity of asbestos, and shakes well. After about twelve hours all suspended matters will have deposited, and the liquid may be easily removed by means of a syphon. The operation of washing and shaking is repeated once or twice with fresh water, and the whole mixture finally passed through a glass funnel, the neck of which contains a pellet of asbestos. If the first portion of the filtrate runs off cloudy, it is poured back until it is clear. This method should be equally applicable for pepsine wine and other solutions of the digestive ferments.

EBONY-WOOD STAIN.

Logwood	1 part
Bruised galls	10 parts
Water	100 "

Boil for an hour, replacing the water lost by evaporation. Strain and add—

Sulphate of iron	1 part
Acetate of copper	1 "

Dissolved in 2 parts of water. Mix well and add 1 part of neutral solution of indigo.

This solution (warm) is first to be painted on the wood, and followed by a coating of a solution made by digesting 1 part of iron filings in 10 parts of vinegar.—*Phar. Zeit. f. Russ.*

FLAVOURING ESSENCES.

Vanilla.—Cut 1 oz. of vanilla beans lengthways and crossways and beat into a mass with 2 oz. of granulated sugar. Macerate for a week with 4 oz. of rectified spirit. It is sometimes necessary to soak them in spirit before bruising them. At the end of the week add 4 oz. proof spirit and macerate again for a week with an occasional shaking. Draw off the liquid and place the mass in a percolator and pass through it sufficient proof spirit to make 1 pint. Colour with caramel if desired and filter, using pumice-stone powder if necessary.

Strawberry :—

Butyric ether	3ss.
Acetic ether	3ss.
Sp. vini rect.	3viij.
Aque	3viij.
Ac. tart.	gr. xxx.
Tr. cochineal	q.s.

M.

Raspberry :—

Butyric ether	3ss.
Sp. vini rect.	3viij.
Aque	3viij.
Ac. tart.	gr. xxx.
Tr. cochineal	q.s.

M.

Lemon :—

Ol. limonis	j.
Sp. vini rect.	Oj.

Slice the whole of one good-sized lemon, beat it to a pulp in a mortar with 2 oz. granulated sugar, add it to the oil and alcohol previously mixed, macerate it for a week or more with occasional agitation, and filter.

The result pays for the trouble, and is a beautiful colour.

Blackberry :—

Butyric ether	3ss.
Amyl acet.	5j.
Ext. vanilla	5ij.
Tr. orris	5ij.
Sp. vini rect.	ad Oj.

M.

The orris may be decreased if desired. Colour with caramel. [Ed. Mitchell, in *Druggist's Bulletin*.]

Trade Report.

Notice to Retail Buyers.—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., April 12.

Although the prices of several of the articles of produce in which druggists are more or less interested are again in buyers' favour, the general tone of feeling tends to exhibit greater hopefulness, and firmness exists where it has been absent for a lengthened period. The staple articles such as sugar, tea, and coffee maintain their firmness. Pepper is a shade easier, but to no greater extent than statistics warrant. Cloves have declined in value, but should have done so long before. Shellac is easier, and although strong efforts were made to force it down, they have only been successful as yet to the extent of 2s. per cwt. Quinine, which early in the week receded somewhat suddenly to 1s. 6d., has recovered strength, and now there are no sellers, even at 1s. 7d. Predictions of an abundant crop of opium are general. Chemicals, though firm in some instances, are quiet in others, and prices do not give way. Quicksilver, as far as the official quotation goes, has been reduced. Uneasy apprehensions have been entertained for several weeks past regarding the holdings of produce by some houses which have recently had to call their creditors together, but the revelations at the meetings have dispelled all fears—so far as articles in which this Journal is interested are concerned.

The business recorded in the official returns for March cannot be regarded as unsatisfactory, considering that Easter was deducted from the available period this year, while in 1887 March was an unbroken month. In both years the weather was about equally unfavourable. The imports in March, 1888, amounted to 32,591,000*l.*, a decrease of 204,000*l.*, or about $\frac{1}{2}$ per cent., and the exports to 19,047,000*l.*, an increase of 45,000*l.*, or about $\frac{1}{4}$ per cent. In other words, this country did just about as much business this year in twenty-five days as last year in twenty-seven. So far as these statistics can be taken as a guide they would seem to show a singular improvement in the drug trade. Under the designation of "drugs unenumerated" they show the following details of imports:—In March, 1886, to the value of 69,328*l.*; in March, 1887, to the value of 53,868*l.*; in March, 1888, to the value of 106,802*l.* The one thing certain in regard to this extraordinary development is that it has not been occasioned by any sudden increase of demand.

ITALIAN CUSTOMS DUTIES.—Information has been received at the Foreign Office from Her Majesty's Ambassador at Rome that a notification has been issued by the Italian Director-General of Customs that after the 10th inst. invoices were no longer to be accepted as proof of the origin of goods imported into Italy. All goods, in order to enjoy conventional treatment, must be furnished with a certificate of origin, except such as have come straight from the country of production or which have been merely transhipped in a French port.

ACIDS.—Tartaric and citric are both firmer, without, however, quotable change. Oxalic, demand dull, 3 $\frac{1}{2}$ d. to 3 $\frac{3}{4}$ d.

ALOES steady; 9 bags Cape withdrawn. Further arrivals of 66 packages are reported this week.

CASTOR OIL is in only moderate demand at the extremely low prices so long ruling; an ordinary second Coconada quality being now obtainable at 2 $\frac{3}{4}$ d. per lb., with straw colour at 2 $\frac{1}{2}$ d. Calcutta oil does not offer quite so freely.

CINCHONA.—At Tuesday's sales there was a dull tone, and

prices marked a decline averaging 5 to 10 per cent. The unit is calculated at 2 $\frac{1}{2}$ d. to 2 $\frac{3}{4}$ d., and nearer the higher figure. Heavier shipments from Ceylon account for this decline. The packages catalogued included 1,158 packages of South American, of which only about 20 sold. Calisaya quill (Bolivian cultivated) sold at 7d. to 7 $\frac{1}{2}$ d. for broken (one package at 5 $\frac{1}{2}$ d.), to 8 $\frac{1}{2}$ d. to 9d. for fair to good. Of Ceylon and East India there were 2,243 packages, of which nearly two-thirds sold. The average quality was, however, very low. Succirubra ranged 1 $\frac{1}{2}$ d. to 3d. for siftings, 1d. to 1 $\frac{1}{2}$ d. for branch, 1 $\frac{1}{2}$ d. to 4 $\frac{1}{2}$ d. for chips, some of which were largely mixed with branch; spoke shavings, 2 $\frac{1}{2}$ d. to 5d.; root, 2 $\frac{1}{2}$ d. to 5d., and a small supply of special quality, 8 $\frac{1}{2}$ d.; reined, 2d. to 3d.; ordinary to fair, 4 $\frac{1}{2}$ d. to 6d.; good to fine, 7d. to 10d. Crown brought 2d. to 3d. for branch and small, and 5d. for fair; stem chips, 3 $\frac{1}{2}$ d. to 5 $\frac{1}{2}$ d. for havings, 6 $\frac{1}{2}$ d. for root, from 3d. up to 1s. 1d. for renewed. Nigerian was sold at 10d. to 1s. for stem chips, and 3d. to 5d. for branch. Of 31 cases of Java sold, long bold realised 8 $\frac{1}{2}$ d. to 9 $\frac{1}{2}$ d., dull short quill varying from 4 $\frac{1}{2}$ d. to 5d.

COD LIVER OIL extremely dull, and prices very low.

ESSENTIAL OILS.—Aniseed is in better request though the demand is by no means rampant, but weak buyers having now been cleared out, there is a decidedly finer tone. Quotations to arrive are a little harder, but some could no doubt be still obtained at 6s. c.i.f. There are now no sellers on the spot under 6s. 2d. landed. Cassia is quiet though there are no pressing sellers, and quotation on the spot 3s. to 3s. 1d. per lb. Lemongrass is a little scarcer than of recent date; the quotation is 1 $\frac{1}{2}$ d. per oz. but it is hardly likely that with fresh supplies higher than 1d. could be got. Gingergrass is gradually falling off in supply, and with any renewed demand an advance in value would doubtless take place. Peppermint: American, H. G. Hitchkiss offers at 10s. 6d., but there are only buyers at 10s. 3d. Japanese, fair, 3s. 9d.; good, 4s.; and fair sales made.

IPCACUANHA.—The arrival this week of 87 packages by the *Horror* from Monte Video is a welcome reinforcement of our much-shrunken stock.

JAPAN WAX is dull of sale; quotations are without change and transactions of meagre account. Seventy-seven cases catalogued on Tuesday last were held higher than buyers' views. CARNAUBA sells steadily, but only in retail quantities. Thirty-seven bags offered and retired.

OPIMUM.—Favourable reports of the new crop continue to predominate. The prospects of an abundant harvest are said to be excellent both in European and Asiatic Turkey. The lowest estimates are of a crop of 8,000 baskets, and most authorities expect a much greater yield. Anticipations of 12,000, and even of 15,000, baskets are declared, and some observers think the only difficulty will be of lack of labourers to collect the juice. It is not surprising, in view of these reports, that Smyrna prices continue to give way. The latest quotations vary from 11s. per lb. for New Yeri, to 10s. 3d. for new Karahissar (10s. for old) to 8d. for taliquale Yeri, f.o.b. Liverpool, London, or Marseilles.

QUASSIA WOOD meets purely hand-to-mouth demand. Eight tons were offered at sale and retired.

QUICKSILVER is dull at 7*l.* 10s. second hands, a decline of 2s. 6d. Stock in London is estimated at 64,000 bottles against 56,500 this time last year.

QUININE has had a rather eventful week. Before the sales German makers had offered their product at 17d., and second-hand holders did business at 1s. 6d. After the sales the sales took place direct at 1s. 6d., a second-hand holders quoted a halfpenny less. Over 300 oz. of B.S. and Brunswick brands were bought at 1s. 6d., after which, however, makers declined to go on. On Thursday there was a much stronger feeling, and after 250 oz. had been booked for forward delivery at 1s. 7d., makers refused to quote. Messrs. Howards, who intimated on Wednesday an inclination to accept lower terms than the market, were firmer again on Thursday, but apparently not disinclined for business at their old rates, 2s. 2d. per oz. in vials. It is generally thought that the article has touched bottom—indeed, a much better feeling prevails, and not for the fear that a few lots held by money-

account speculators recently gone to grief are likely to be put upon the market, a larger advance would probably forthwith place. There seems to be an intent on the part of the manufacturers jointly to do their utmost to keep prices down. They have doubtless profited well this year, as they have managed to buy back the bulk of their sales at reduced prices, without importing new stuff to any appreciable extent.

TAMARINDS are in strong demand, with advancing rates. A parcel of new season Barbadoes, consisting of 205 packages, sold under the hammer this week at 21s. 6d. to 26s. per cwt. for slightly dark to fair bright, and some old Montserrat at 15s. to 17s. 6d.

CHIN GALLS are very quiet, and we do not know of a transaction of any importance during the week to place on record. 18 cases Japan catalogued on Tuesday were bought in at 60.

CUTCH—Quiet, and transactions of only a retail character. 50 boxes at the auctions were bought in at 28s.

GAMBIR, firmly held. During the week 50 tons have been sold on the spot at 22s. In auction 260 bags cubes were bought in at 34s.

GUMS—The gum sales on Thursday were so numerous and the catalogues so bulky that the varnish gum portion did not conclude until 2.30 P.M., and as it was found impossible to sell at the water gums to-day, the sales were adjourned, in accordance with the wishes of the majority, until Friday.

GUM LIBANUM.—The large quantity of 1,367 packages was catalogued, consisting mostly of ordinary East India and Aden drop, with a sprinkling of really fine; about 200 packages garblings, and only a few of siftings. Prices were a shade easier, but the demand is good, and had importers shown disposition to realise, sales could have been effected without much fall in value. Only 94 packages were sold, as follows: Good bold pale drop at 55s.; small to bold palish, 41s. to 5s.; pale small, badly garbled, 39s.; bold yellow, 35s.; dark ditto, 30s. A few bales small palish blocky Aden at 31s. to 5s.; garblings all withdrawn. Good pale siftings at 14s.; ordinary ditto, 12s. 6d. There are 3,410 packages Gum Arabic of 17 of Hog Tragacanth catalogued. The assortment of Gum Arabic is as follows:—2,528 packages East Indian, 30 Egyptian Amrad, 746 Aden, 40 Tripoli, 38 Australian, 3 Cape, 25 Senegal, and 128 Turkey sorts.

SHEAC has remained depressed in tone consequent upon increasing stock, continuous supplies, and the fear of approaching heavy offers on the market in consequence of the inability of certain holders to meet their engagements. The private trade since our last has been of larger extent than became publicly known, and the fall in prices from nominal quotations is recorded below as having taken place at this week's auctions was already discounted last week. The importers, speculative "bear" operators, for purposes best known to themselves, dropped their quotations for arrival parcels in anticipation of the probable result of the large quantity to be forced in at the hammer. The public sale catalogues for Tuesday last presented a total of 1,800 chests of all descriptions, over half of which met excellent competition at an average fall in value from the previous week's auction rates clearly 2s. per cwt. on fine and second orange sorts, and common button, but without material alteration for other sorts; there was as large a range as 2s. to 3s. per cwt. in some lengthy piles, showing irregularity and fears at opening and confidence at the close. Some of the principal figures were: 60s. to 62s. per cwt. for good HSS to fine orange; 45s. to 46s. per cwt. for slightly livery second orange, and up to 49s. for full standard TN; 43s. 6d. per cwt. for weak reddish second orange; 41s. up to 43s. for unworked second orange alone, 2s. under standard; 54s. to 60s. for ordinary first to fine blood button; and down to 30s. for low dark firsts.

TURMERIC is extremely low in price and in somewhat restricted demand. Bengal of recent import has been of poor quality, the low range of rates not admitting of screening at picking. Madras is also of distinctly inferior grade compared with what it used to be, and the operation of picking for medicinal and culinary purposes becomes year by year more difficult, the yield of good quality from the total supply

being infinitesimal. The auctions this week presented no Bengal, but there were 1,233 bags Madras catalogued, and to the extent of about a fourth the owners met the market at 6s. 6d. to 6s. 9d. per cwt. for dull wormy coarse finger, and 5s. 9d. inferior. Of course there was nothing in these lots which would yield a druggist's quality.

OILS.—Linseed keeps steady at 18l. 10s. to 18l. 12s. 6d. for spot, 18l. 15s. in barrels, 19l. to 19l. 7s. 6d. May-August. Forward rates getting stronger. Rape unchanged: refined, 23l. 15s. to 24l. Turpentine has advanced during the week to 29s. spot, but closes easier at 28s. 9d. Petroleum shows a firmer tone and is now quoted 6d. to 6½d. spot; month, 5½d. to 5¾d.; September-December, 5½d. to 5¾d.; Russian, 5¼d. to 5½d.; last four months, 5¼d.

ARROWROOT.—1,512 packages, viz., 222 cases Natal, partially sold at 1½d. to 2¼d. per lb. for middling to good; 1,180 barrels St. Vincent about half sold at 2½d. to 2¾d. for good, and 2¼d. fair; and 110 bags Queensland withdrawn from the sale, being a shade cheaper. The low range of prices so long and almost continuously prevailing for this article precludes the possibility of the growers giving much time to the selection of qualities, and the long absence from the market of those higher grades we were in former years accustomed to receive is a circumstance to be deplored.

GINGER.—2,616 packages, comprising 1,939 cases and bags Cochin, nearly 1,500 of which were sold at and after the sales; large selected cut and trimmed at 77s. 6d. to 81s. 6d.; mixed with medium, 71s. 6d.; medium cut, fair to good, 44s. to 49s.; small bright of same, 29s. 6d. to 30s.; tips, 23s. to 26s. 6d.; partly cut of similar, to first three sizes, respectively at 49s., 35s. to 37s. 6d., and 31s. 6d. to 34s.; rough washed bold at 37s.; medium, 30s. to 32s.; small, 24s. 6d. to 26s. 6d.; ordinary dull and discoloured, small to bold, 23s. to 32s.; rough shrivelled ordinary cuttings and ends, for grinding and distilling purposes, 14s. to 20s. 6d.; very low export, 10s. to 11s.; the prices being firm for good and desirable qualities, but decidedly cheaper for rejections. 519 barrels Jamaica for the most part sold at steady prices, bold washed at 80s.; medium, 60s. to 70s.; small, of good colour, 53s. to 57s.; small rough washed and dull mixed with medium, partly dirty, 45s. to 51s.; inferior hardish and lean, 39s. to 43s. 110 bags African retired. The abundance of supply of the common kinds of Cochin renders the value of this country's product so low as not now to pay for collecting. 31 packages green and 17 packages Japan retired.

MACE.—14 cases East India cultivated partly sold; Penang at 1s. 11d. per lb. for common, and Java at 1s. 10d. to 2s. 2d. for rejections to ordinary somewhat broken; 12 boxes West India sold readily on a similar basis, all being steady values; 36 cases Bombay, wild, were mostly quitted at the comparatively high price of 8¾d. for that of fair appearance suitable for mixing, and 7¾d. to 8d. grinding quality.

NUTMEGS.—107 packages, cases and boxes, East India descriptions, only about 20 of which met the market. Penang, 66 to the lb., at 3s. 2d. per lb.; 82 to the lb., at 2s. 7d.; 91 to the lb., 2s. 4d.; and 122 to the lb., 1s. 10d. Java, 89 to the lb., at 2s. 4d., being very steady rates. 50 boxes, &c., West India descriptions all sold at a relative range of prices.

PEPPER.—4,785 packages, comprising—of white, 214 bags Singapore, 152 bags Siam, and 690 bags Penang; and of black, 869 bags Singapore, 132 bags Lampong, 746 bags Aleppy, 200 bags Western Coast, 100 bags Tellichery, 80 bags Malabar, 1,421 bags Penang, and 181 bags long. Of these, 176 bags Singapore black were offered "without reserve," and realised 7¼d. to 7½d. for fair though rather grey; beyond the parcel only a few hundred bags of the Aleppy sold under the hammer at the same price as above for fair brownish natural; but since the auctions holders have met buyers at the public sales at quotable reductions in value of ½d. per lb., and several parcels of the various sorts have changed hands.

PIMENTO.—2,942 bags were in the main held for an advance in value, but some 700 or 800 bags were disposed of

at $2\frac{3}{4}d.$ per lb. for good bright; $2\frac{3}{16}d.$ to $2\frac{1}{4}d.$ fair to barely good; and $2\frac{1}{8}d.$ coarse and partly mixed with grey.

OTHER SPICES.—The public sales of spices, &c., held on Wednesday may be counted among the heaviest on record. The bulky catalogues embraced the following:—*Cloves*: 1,224 packages, comprising 1,116 bales, &c., Zanzibar, less than half of which holders were disposed to sell at buyers' prices, which indicated a decline of $\frac{1}{8}d.$ per lb. from the previously-ruling rates, the figures realised being $7\frac{3}{4}d.$ to $7\frac{3}{8}d.$ for fair to good bright, and $6\frac{3}{4}d.$ to $7d.$ for rather dull and slightly mixed to fair. 106 bags Amboyna retired above value, and 2 cases Penang sold at $10\frac{1}{4}d.$ for fair. Most of the stock is at present kept off the market, and is in the hands of Eastern houses who are speculating on the next crop. We shall have either much higher or much lower prices. *Chillies, or Pod Pepper*: 147 bales Zanzibar sold at 29s. for bright red of fair quality, being a shade easier. *Capsicums*: 170 packages. A few only sold, at 13s. to 18s. for common mixed unpicked to good bright red even Bombay, and 50s. fine picked Natal.

SAGO.—2,290 bags, and three-fourths sold, the greater part without reserve. Medium grain, of good quality, at 12s. per cwt.; small grain, 11s. for fine, 9s. 6d. to 10s. for good, 8s. 6d. to 9s. ordinary to fair brown, being steady for the better, and 3d. cheaper for the commoner kinds.

SAGO FLOUR.—1,100 bags bought in at about 9s. 6d. average.

TAPIOCA.—4,133 packages, consisting about two-thirds of flake, only a little of which sold at $2\frac{1}{4}d.$ to $2\frac{5}{16}d.$ per lb. for fair white, and $2\frac{3}{16}d.$ fair, slightly off colour, Singapore. A small quantity of Rio brought $3\frac{1}{2}d.$ for good. The remaining third, of Pearl, found buyers for about 600 bags good to fine bullets at 23s. to 24s. per cwt., being 1s. 6d. lower; and 19s. to 20s. dull to good seed, showing no change in value.

TAPIOCA FLOUR.—540 bags bought in at 11s. per cwt.

TEA.—The market remains very dull, very little business being done by private contract and sales dragging. The whole of Tuesday's sales of China, Indian, and Ceylon teas were postponed to Wednesday as a mark of respect to the late Mr. W. R. Winch, of Messrs. Peek, Winch & Co., Tuesday being the day of the funeral. The moderate sales for the week have sold flatly, common Kaisows being quoted at $3\frac{3}{4}d.$, but very little Moning for price being offered. Figures for March recently published show that stocks of Congou at the present moment are some five million pounds heavier than at this time last year, and with decreasing deliveries of China tea, everything points to lower prices for all lower grades of Congou, in spite of the fact that common teas have never been more than fractionally lower than at present. If importers force their holdings of common teas on the market there is little chance of present prices being maintained, though the scarcity of common Assams may have a slight influence on prices. Assams on the other hand are a very strong market, $4\frac{1}{2}d.$ broken of a few months ago being eagerly taken at $6\frac{1}{2}d.$ to $7d.$ and $6d.$ to $6\frac{1}{2}d.$, leaf teas of the same time fetching 8d. per lb., and wanted at that price. Pekoe Souchongs with any quality fetch 9d., and but little Pekoe is to be bought under $9\frac{1}{2}d.$ to $10d.$ Ceylons are rather firmer, though the sales for the week are very heavy, and all teas under 1s. show a small advance. This week's sales, however, are far heavier than we are likely to have again for some time to come, and as teas under 1s. still show good value, we consider them worth buying. Javas with heavy sales are very firm in sympathy with common Assams.

THE AMERICAN MARKETS.

NEW YORK, March 26.

THE following notes of the New York drug market were written by our correspondent at Easter:—

In consequence of the late severe snowstorm business was practically suspended, but during the past week there has been more activity. There are few changes of interest. The two most prominent articles, opium and quinine, are rather flat.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allow-

ances, discounts, &c., being taken into account. Importers can therefore see at a glance the course of this market compared with their own.

OPIUM is very weak. Notwithstanding recent reports of large lots changing hands, and rumours of an immediate advance, there has been a steady decline in the market for the last two months, and it can be purchased at 20 in bond, or equivalent to 16s. 10d. English, in single lots, and nearly even money, or about \$2.00 (16s. English) in ten-case lots, and the consequence is a light demand and considerable uncertainty as to the future condition of the article.

QUININE.—While the American manufacturers have steadily maintained their price for some time back at 49c. (0.01d.) for bulk, foreign has been selling at 43c. (1s. 9½d. to 45c. (1s. 10¾d.), according to brand, even in the face of quotations from abroad of 2s. Some large holders increased their price immediately upon receipt of the advices of advance, and the advance in prices of bark at the London sales, if they were not sustained by others, who, being anxious to realise, still continue to offer at previous prices, at which moderate quantities can at present be obtained, showing a weakness in the market here, which is attributed to large stocks in speculators' hands, and a belief in the minds of many that there is a good profit in manufacturing the article at present selling prices.

BROMIDE OF POTASSIUM is still selling at 33c. bulk, manufacturers' price, in 1,000-lb. lots and upwards.

BROMIDE OF SODIUM, 43c. per lb., large lots (2s. 9).

BROMIDE OF AMMONIUM, 42c. per lb., large lots (9d.).

OIL (WINTERGREEN) has taken a sudden advance from \$1.70 to \$2.00 in consequence of the snow, on account of the difficulty caused thereby in gathering the herb from which it is made. Some of the roots and barks were similarly affected, the most prominent one being *Gola Seal Root*, which advanced from 35c. to 60c. These figures, however, are temporary, as with the clearing away of the snow, and renewed ability to procure the products and regular supplies coming along again the prices will resume their former condition. At present oil of wintergreen can be obtained at \$1.90.

OIL (PEPPERMINT).—H. G. Hotchkiss, \$2.35; Wap Co., New York State, in tins, the next best in the market 2.05 Western, \$1.75.

OIL (SASSAFRAS), cans and cases included, 48c.

OIL (CASSIA).—There is an apparent movement in it, as one large holder is asking 74c., while it is obtainable, 72½c. from some who have not as yet concluded to follow the actions of the house alluded to.

OIL (SPEARMINT).—H. G. Hotchkiss, \$2.50; Western, \$2.00 to \$2.40.

OIL (PENNYROYAL), 65c. to 75c.

OIL (WORMWOOD).—H. G. Hotchkiss, \$6.00; Western, \$4.50.

BALSAM COPAIBA is selling at 55c. to 57½c. for neutral American; 62½c. for Pará and Maranhão; and 65c. for best for solidifiable; all very firm.

BALSAM (CANADA FIR), \$3.25.

BALSAM (OREGON FIR), \$1.15.

COD-LIVER OIL.—Norwegian, \$26.00 and \$27.00 per barrel (including 25 per cent. duty) is the ruling price for best brands, with lower tendency.

CUBEB BERRIES.—Only true can be sold in this market, the Customs having lately rejected two or three lots from London as spurious, which were obliged to be re-exported. Prime true berries, more or less stemmy, are selling at \$1.40 here, while prime sifted are offering at \$1.55.

CUTTLE FISH in staps is scarce and in few hands, and firm at 22c. Large pieces in large cases offered at 10c. to 12c., and do not readily sell in this market; mainly used for powdering, for which there is little demand.

GLYCERINE.—The strong competition between Eastern and Western manufacturers has caused an unsettled market

here, prices could be shaded somewhat. Quoted 20½c. for barrels and drums, and 21½c. for cases.

INSIDE POWDER is very firm at the advanced prices. Reliable imported brands are bringing 47½c. to 55c.—a wide range, but the former price is for such as are not so well known and are being pushed, while the latter figure is asked for one or two of the oldest and best known; and 50c. is asked for powder made here from imported flowers, which is even lower than the last crop of whole flowers are held at which is from 52½c. to 60c. Our late season has retarded the demand undoubtedly, but upon the approach of milder weather—the next two months being the ones during which the demand is always the greatest—much higher prices for powder are looked for.

THE GERMAN MARKET.

HAMBURG, April 10.

ALTHOUGH in several articles a fair business has been transacted, the last week has been in general a rather quiet one, but various alterations have occurred in quotation.

Prices in this column are given in marks (11¾d.) per 100 kilos, or per kilo. (1 kilo. = 2 lb. 3½ oz.; 50½ kilos. = 1 cwt.). The prices in parentheses show the parity in London.

ALG.—Of Curacao none was sold, and the article remains entirely neglected.

ANJONY.—Crude Japan: The market is very firm; July-August delivery, 47m. to 48m. (22s. to 23s.) was paid.

BAMS.—Copaiba: A fresh advance took place; 5.10m. (2s. 6d.) is asked for genuine qualities, all arrivals being quickly taken up, having been sold for forward delivery. Peru: The very low prices are beginning to attract more attention, and a firm of speculators took up a good deal of the stock first hands, and consequently a better feeling prevails in the market. Tolu: No business.

BAS.—Cinchona (Porto Cabello): Fine qualities are rare and command high figures. Very extreme prices, 140m (3½d.) asked by owners. In spite of the high prices there is been a regular demand for this bark. Maracaibo was sold at 30m. (1½d.), a very low price. Lima, in large quantities with no demand. The new cultivated Calisaya bark is realised at 3.60m. to 4m. (1s. 7d.). Condurango very steady at 3.25m. Quillaya bark is arriving in considerable quantities and depressing the market. Second-hand holders have reduced their prices to 25m. to 26m.

CAMPHOR (REFINED).—The market is quiet, and second-hand buyers undersell the makers.

ERT OF RYE.—The market recently showed rather more animation, but at present it has again relapsed into a very bleak condition; 2.50m. is quoted for a good Russian corn.

QUINE is weak; second-hand holders asked 55m. to 58m.

OR (ESSENTIAL).—Star-anise is slowly falling in value; 133m. to 14m. is now wanted. Cassia unchanged. Peppermint H. G. Hotchkiss quite neglected at 10m. to 10½m. Also pan oil has not made any improvement; 8m. is still the price the supply is a very large one.

OR (COD LIVER).—The position remains practically unchanged, the principal holders not caring to sell at the low prices which the trade are prepared to pay. Prime steam Lofor is held at 62m. to 65m. per cask.

ROOTS.—Calumba: About 300 bags were offered, but there is no inquiry for this article. A good root can be had at 40m. Galanga tends lower; 900 cwt. arrived and found buyers at a very low price. Jalap is very steady, but with moderate business only. Advices from Mexico speak of the collections of the root being quite neglected, and no large quantities can be expected this season; 95m. (4½d.) was paid for it, rather lean Vera Cruz.

WAX (JAPAN).—The market has declined about 4m. per 100 (97m. (43s.) having been accepted for good hard whitish squares.

BOARD OF TRADE RETURNS.

IMPORTS		Mar., 1836	Mar., 1887	Mar., 1888
Drugs, unenumerated ..	value £	63,328	53,868	106,802
Chemical manufactures and products, unenumerated ..	"	119,877	117,152	120,456
Chemicals & dyestuffs, unen. ..	"	164,847	154,900	194,242
Oils, not enumerated ..	"	76,944	59,388	85,038
Alkali	cwt.	4,517	4,571	5,219
"	value £	3,096	3,424	3,380
Brimstone	cwt.	44,943	35,521	74,757
"	value £	10,566	8,636	16,451
Nitrate of soda	cwt.	131,017	226,220	177,076
" of potash	value £	73,884	115,597	91,407
"	cwt.	25,510	39,839	26,684
Quicksilver	value £	23,676	34,937	24,797
"	lbs.	538,425	313,500	1,038,299
Cinchona bark	value £	42,724	30,515	112,082
"	cwt.	8,500	16,670	15,017
Gum Arabic	value £	50,924	80,385	63,095
"	cwt.	8,385	2,794	4,000
Lac, seed, shell, stick, and dye ..	value £	27,554	14,939	17,650
"	cwt.	11,104	10,913	15,726
Cinnamon	value £	32,820	28,475	42,528
"	lbs.	183,247	31,820	122,186
Ginger	value £	3,303	1,519	3,805
"	cwt.	5,153	11,507	6,393
Pepper	value £	8,750	17,133	13,144
"	lbs.	2,320,413	3,490,578	2,443,985
Bark (for tanners' or dyers' use) ..	value £	6,452	108,182	79,699
Aniline	cwt.	23,501	24,805	8,235
Alizarine	value £	7,926	10,355	2,702
Other coal-tar dyes	"	19,421	27,950	21,858
Cochineal	"	24,149	20,706	26,707
"	cwt.	443	244	976
Cutch and gambier	value £	1,095	695	744
"	tons	6,299	3,878	4,727
Indigo	value £	3,248	3,924	3,165
"	cwt.	74,900	93,742	80,367
Maïder, maïder root, &c. ..	value £	19,339	17,242	16,384
"	cwt.	424,904	371,811	363,097
Cocoa-nut oil	value £	1,977	1,460	1,431
"	cwt.	3,525	1,678	1,932
Olive oil	value £	8,457	19,696	37,359
"	tons	10,238	27,524	46,770
Palm oil	value £	3,473	2,707	1,970
"	cwt.	134,413	99,037	77,006
Petroleum oil	value £	97,326	80,131	83,090
"	gals.	99,944	81,334	81,395
Oil seed	value £	6,294,481	4,765,355	6,114,118
Turpentine	value £	215,023	170,874	171,874
"	tons	970	1,494	1,449
"	cwt.	24,672	34,147	35,452
"	value £	11,153	8,714	34,053
"	value £	16,620	11,359	47,463
EXPORTS				
British and Irish produce—				
Drugs and medicinal preparations, unenumerated ..	value £	71,108	81,750	86,284
Sundry chemicals	"	162,831	185,795	189,123
Painters' colours and materials ..	"	118,226	119,707	117,818
Alkali	cwt.	537,764	543,104	490,966
"	value £	156,680	154,709	127,961
Bleaching materials	cwt.	137,583	164,480	113,237
"	value £	44,074	62,512	42,235
Seed oil	tons	7,416	8,601	7,980
"	value £	157,448	171,379	160,337
Soap	cwt.	40,716	33,457	51,578
"	value £	44,415	38,117	48,125
Foreign and Colonial merchandise—				
Chemicals, unenumerated ..	"	12,404	22,022	35,104
Cinchona bark	cwt.	9,928	17,416	9,977
"	value £	66,727	71,673	29,016
Cochineal	cwt.	851	704	422
"	value £	5,497	4,521	2,635
Cutch and gambier	tons	1,154	483	685
Gum Arabic	value £	26,719	12,471	1,8300
"	cwt.	4,404	2,595	3,019
Indigo	value £	17,094	10,665	12,911
"	cwt.	12,624	9,665	8,170
Lac, seed, shell, stick, and dye ..	value £	231,700	222,238	172,239
"	cwt.	5,979	6,641	5,207
Cocoa-nut oil	cwt.	18,174	18,134	13,366
"	value £	5,435	6,250	6,515
Olive oil	tons	7,558	8,914	9,394
"	value £	347	163	199
Palm oil	cwt.	15,083	8,020	8,586
"	value £	28,234	39,437	58,082
Petroleum oil	gals.	30,101	39,756	57,466
Quicksilver	value £	56,156	31,294	36,076
"	lbs.	2,638	1,242	1,468
Nitrate of potash	value £	768,496	361,113	180,768
"	cwt.	59,439	33,730	19,845
Cinnamon	value £	2,212	2,463	1,120
"	lbs.	1,942	2,268	925
Pepper	value £	153,839	160,900	149,466
"	lbs.	4,400	5,874	5,095
"	value £	1,251,178	2,594,900	1,276,791
"	value £	41,553	81,259	40,678



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c., not noticed in this issue will, if possible, be attended to next week.

The Pharmacy Bill.

SIR,—I am instructed by the Council of the Incorporated Society of Chemists and Druggists (Limited) to request you to kindly insert in your valuable paper a copy of the petition enclosed, which now lies at the office of the Society, 63 and 64 New Broad Street, E.C., for signature. I shall be happy to forward to any country chemist sheets for signatures, to be annexed to the petition.

If the Bill should be again brought forward in the House of Commons this session, which is doubtful, every effort ought to be made to obtain the insertion of the proposed amendments set out in the petition.

Should we be successful in amending the Bill as desired, immediate proceedings will be taken by the Society against the various stores and other persons infringing the Pharmacy Acts.

I have the honour to be, sir,

Your most obedient servant,

CHAS. R. TAYLOR,

Secretary (*pro tem.*).

Boston House, 63 and 64 New Broad Street, E.C.

April 10.

In Parliament, Session 1883.

PHARMACY ACTS AMENDMENT BILL.

PETITION PRAYING FOR THE INSERTION OF AMENDMENTS.

To the Honourable the Commons of the United Kingdom of Great Britain and Ireland in Parliament assembled.

The humble petition of the Incorporated Society of Chemists and Druggists (Limited) and of the undersigned Chemists and Druggists of the United Kingdom,

Sheweth as follows:—

1. That numerous unqualified persons, to the public danger, are in the habit of selling poisons in contravention of the Pharmacy Act, 1868, and it is desirable that further restrictions should be imposed upon such persons, and greater facilities given for recovering the penalties imposed by the Pharmacy Acts, and that the amount of such penalties should be increased.

2. The Medical Act, 1866, section 26, contains a provision enabling private persons to take proceedings with reference to the infringement of the Medical Acts, and it is desirable that the Pharmacy Acts should be brought into accord with such Medical Acts.

3. That the majority of chemists and druggists conduct their businesses personally, and often single handed, and have to close same or leave them in charge of incompetent persons when summoned on juries, and it is desirable that all chemists and druggists actually in business should be exempt from service on such juries, and that the Juries Act, 1870, should be amended accordingly.

Your petitioners therefore humbly pray your right honourable House that clauses to the following effect may be inserted in the said Pharmacy Acts Amendment Bill now before your right honourable House.

A. That there shall be repealed so much of section 12 of the Pharmacy Act, 1852, and of section of 15 of the Pharmacy Act, 1868, as provides that the penalties to be recovered under those Acts shall be recovered by the Registrar to be appointed under the Pharmacy Act, 1852, and such penalties may be sued for and recovered by any private person, and such penalties shall be increased to 10% in each case.

B. That the words "Registered Pharmaceutical Chemist" in the schedule to the Juries Act, 1870, shall be so construed as to include all registered chemists and druggists.

C. That the word "person" in this Act, and in the Pharmacy Act, 1852, and the Pharmacy Act, 1868, shall include the plural number, and also any corporation or company. And your petitioners will ever pray, &c.

SIR,—You say my extracts alleged from your article are not quite fair. If you really mean to hold to that opinion, I am sorry to hear it, and must plead an endeavour to compress the information in as small a compass as possible, whilst not altering the sense of the whole. Thwarting articles may have been written on different occasions, but they bear on the clause just as much now as a year ago. Respecting the paragraphs apparently extracts from but of whose parentage you express a doubt, I append numbers of vols. and pages (vol. xxx. pp. 386-87; vol. xxxii. p. 223, 289). The matter respecting constitution of Council I find on looking it up, was furnished by a correspondent (l. xxx. p. 428). It has been my endeavour to quote you as fairly as possible, and I do not stand alone in thinking I have done so. In any case, I am quite content, and remain,

Yours very sincerely

Cardiff, April 7.

A. T. M.

[It is not fair to quote a correspondent's remarks if it were the opinion of the journal which publishes the letter in which the remark appears.]

SIR,—Will you be good enough to allow me, through your columns, to acknowledge a number of letters from unqualified managers in response to an appeal for unification. The majority are from men who, like myself, have served a *bona fide* apprenticeship, and have since been engaged as assistants or managers for varying periods of from ten to twenty years. The reasons adduced for not having qualified run much in the same groove in most cases, the lax and partial enforcement of the Pharmacy Act, 1868, being alleged to be responsible for our present dilemma.

I note with much regret that your editorial articles are certainly not favourable to our cause, but I take your antagonism to be purely a matter of trade policy. So far as the public safety is concerned, to be strictly logical, a prescription should under any circumstances be dispensed or scheduled poison sold, except by a qualified man; but should this Act become law, it is perfectly well known to any inexperienced apprentice may dispense or sell poison in his master's shop, or in a branch shop under a qualified manager, and not necessarily under supervision. The chief effect will be to deprive some two or three hundred steady well-tried, middle-aged men of their livelihood, to be placed chiefly by youths who have just squeezed through the door. Every man who has had any lengthened experience of the daily routine and responsibilities of a chemist and druggist must know the best safeguard is "experience," and I do not hesitate to affirm that in this instance the result would be a positive danger, about the equivalent of substituting for three hundred trusty engine-drivers three hundred youngsters who have just passed a fair examination in Euclid, physics, and applied mechanics.

I am, sir, yours truly

127 Calvert Road, East Greenwich, S.E.

A. A.

SIR,—I should like to say one or two words on the subject of Lord Milltown's amendment, in answer to some of the unqualified managers.

Perhaps it would be as well to remind our friends that the only test of qualification known to the law is the examination

tions Bloomsbury Square, and that if they really are so super—as some of them claim to be—to the ordinary Minoran, all they have got to do is to raise the wile to the tune the examination fees, and pass the gates into the fold the elect in the ordinary way. They will find it infinite easier to do that than to persuade a British House of Commons to lift them over the wall.

Without taking up your space in answering the absurdities of men like "Spes," "Fritz," &c., who seem to expect the whole state of this realm—Queen, Lords, and Commons—to go in body to inspect their special circumstances, I would ask the more sensible of your correspondents on their side what they think it fair, first, to those who have been at the trouble and expense of qualifying, whilst they have been pocketing their screw and enjoying their leisure, and second, to their unqualified assistants, who do not happen to manage branches, but who have in many cases to exhibit more technical skill than the majority of branch managers, for them to demand a royal road for their special benefit.

I rely fail to see any grounds of complaint whatever in this case. When the Pharmacy Act was passed, a clause was inserted substituting a modified examination for the one then insisted, for the benefit of, and to avoid doing an injustice to, those who had then entered the trade, and who might plead that they had entered in ignorance of any examination being required, and if any manager who now feels himself aggrieved by this "branch clause" can show that he was in the trade at the passing of that Act, he can claim the benefit of the oldified examination—[No, he cannot, unless he proved his position before December 31, 1869—*Ed. C. & D.*]; but if not, then he must have entered the trade knowing full well that before he could legally carry on the business he must pass the Minor, and if he has neglected to do so, he has only himself to blame. When a man undertakes to ride roughshod over an Act of Parliament, or in any way to evade its provisions, he takes all the risks along with the main chance, and if he gets checkmated he has no right to complain.

The Pharmacy Act was professedly passed for the protection of the public, and to ensure that those who supplied the public with poisons and medicines should give a legal guarantee of their thorough acquaintance with the properties of such drugs, and therefore to pretend that the public are being protected in the case of a branch shop managed by an unqualified man, and visited perhaps once or twice a week by the proprietor, is mere child's play. If it were necessary for the wile public to be protected at the time of the passing of the Act, it is now necessary that every part of it should be protected, and it cannot, therefore, be just that the portion represented by these branches managed by unqualified men should continue to be unprotected, whilst men who have carried out, at great cost and self-denial, the legal requirements under up and down the country seeking employment.

It has been said that the public are as safe in the hands of some of these unqualified men who have had great experience as in those of the Minor men. I do not dispute it at all, but all managers are not skilled. There were the efficient and the inefficient when the Act was first passed, hence the examinations, which are, and can be, the only means to divide them; and if the efficient now obstinately refuse to possess themselves of the certificate of efficiency, they must be classed with the inefficient. It appears to me, if we are to judge by their spokesmen in your columns, that their motto is, "Evade the law long enough and you will establish a right to its indulgence," which I trust for the sake of all concerned—the qualified, the unqualified, and the public—will not be allowed to prevail.

I am, &c.,

H. ROBINSON.

Ire (35/18) writes:—"I quite agree with your correspondent in last week's issue, H. C. Dadson, in urging chemists and druggists (the backbone of the trade) to unite in trying to get ourselves exempt from serving on juries. Surely the absurdity was once pointed out, with a little exertion there would be no difficulty."

Sir—The following is a copy of a letter which I have just sent Mr. Finlay, Q.C., the talented member for the Inverness, and which I thought, if inserted in your column, might assist some of my brother chemists who hold

similar views to address their own M.P.'s on the subject. This they ought to do at once.

I am, yours truly,

Inverness, April 10.

G. ROSS GALLOWAY.

Copy of Letter.

To R. B. Finlay, Esq., Q.C., M.P.

13 Castle Street, Inverness: April 10.

SIR,—Referring to our conversation on matters pharmaceutical, as promised, I beg to submit for your consideration the following points:—(1) That the proprietors of any business established for the dispensing, compounding, or retailing of poisons should be each and all of them legally qualified under the Pharmacy Act of 1868.

(2) That all patent medicines containing poisons should only be retailed by qualified chemists.

A grocer, or anybody else, may sell under the stamp any poisonous compound without even being aware that it contains poison, and is thus unable to warn his customers as to dose, effects, &c., as I believe most chemists do when selling patent medicines known to contain powerful ingredients.

(3) That if clause 3 of the new Pharmacy Bill should become law, it should be extended to embrace all open shops kept by medical practitioners, the majority of which are kept by unqualified men.

(4) That there is no necessity for the enforced curriculum proposed in the new Bill; a fact fully borne out by the reports of Dr. Greenhow and Sir Douglas MacLagan, inspectors appointed by the Privy Council to be present at the Pharmaceutical Society's examinations.

This last clause would be a serious one for chemists here in the North, as it would likely necessitate our apprentices going far afield to attend the classes. To the class of apprentices we get this is prohibitory, as the parents of most of them would be quite unable to afford the means to send their sons to such classes.

I beg to enclose a circular just issued by a committee of the Glasgow chemists, in which you will find quoted the remarks of Dr. Greenhow and Sir Douglas MacLagan referred to above.

If you can see your way to interest yourself in this matter, I feel sure it will be very gratifying, not only to the chemists in the North, but also to a great number all over the country. I am, sir, your obedient servant,

G. ROSS GALLOWAY.

Branch Shops.

SIR,—I can corroborate your statement that the system of placing branch shops under the charge of unqualified men is a growing one—growing rapidly too—and is injurious to the public and qualified chemists alike. In short, it is practically making the Pharmacy Act of 1868 a dead letter.

Yours truly,

EDINA. (33 43.)

SIR,—Allow me, on behalf of a great many qualified assistants, to thank you for the very plain and common-sense article on "Branch Shops" which appeared in your recent issue. I consider that the complaints of the unqualified managers are quite indefensible. They knew very well when they entered the trade what they had before them; they have had now a period extending over twenty years to qualify themselves in, and it seems hard that, because they have been either too lazy or too ignorant to pass the necessary examinations, they should be allowed to secure the places of those who have undergone considerable expense in obtaining the legal qualification. No one can doubt that many of them are perfectly competent for the positions they hold, and possibly are better business men than a great many who are qualified by law; but an exception here and there is obviously no reason why they should be allowed to evade the existing regulations to the detriment of those who are clearly entitled to the competition for such posts.

Yours respectfully,

E. W. ROUTLEY.

Doctors' and Chemists' Prescribing.

SIR,—The difficulty that a chemist has in steering clear of trouble with the doctor was illustrated by a circumstance which has come under my notice to-day. A child was dying of croup, and the parents went in great distress to a chemist for a mixture which had cured another child of theirs, two years before. The doctor had said that he could do no more for the child. As he was in attendance, the chemist declined to supply. Shortly afterwards, a friend of the parents called and asked for croup mixture for her own child. This the chemist gave, but had his own opinion as to its destination. The child first mentioned recovered, and its parents confessed the ruse. The chemist now intends to make a proprietary article of his mixture, and so escape the responsibility of prescribing it for the future.

Yours truly,
HEDER. (35/48.)

The Pharmaceutical Society.

SIR,—Surely some of our chemists are peculiarly constituted individuals. I refer to those whose energies seem to be spent in trying to bring the Pharmaceutical Society into disrepute. No matter whatever subject is brought forward, it evokes the same howl of execration from these discontents, and why? Can the reason be that having passed an examination they are disappointed to find they have to work for their living and face competition like other tradesmen? I would also remind these perpetual grumblers that the Pharmaceutical Society is an elected—not a selected—body, and ought therefore to be thoroughly representative. Referring to the Pharmacy Bill now before Parliament, I would urge all supporters to write their several M.P.'s, asking their assistance in passing the measure, and so secure that further power for our Society which our Glasgow brethren seem to object to—one of their reasons, note, being that it will reduce the number of entrants to our calling; a consummation devoutly not to be wished, according to their lights.

Yours truly,
PROGRESS. 35/33.

Retail Co-operation.

SIR,—If I rightly understand your correspondent "Fides," 22/60, he means this—that he will sell my goods if I will sell his. In addition, he will give me gratis his experience in pushing the particular preparation to which he refers. This will be a better system than our selling Eno, Lamplough, or Beecham. The principal condition of success will be the suitability of the nostrums for each district. The matter is an interesting one, and I shall be glad if "Fides" will write again.

Yours truly,
HEDER. (35/48.)

Treating Black Eyes.

SIR,—Noticing several inquiries lately in your correspondence column for a cure for black eyes, I send you a copy of a clipping from the *New York Evening Sun* which I made some half-year ago. It may afford information of some value to some of your correspondents.

Yours truly,
1,309 Third Avenue, New York, THOMAS LATHAM.
March 27.

To the Editor of the *Evening Sun*.

SIR,—I observe in your versatile journal reference to a root which a certain professor uses with much success in the treatment of black eyes. This professor acknowledges that it comes from England, but otherwise he keeps its identity as secret as possible.

He acknowledges too much.

England has a flora of very creditable extent, but it is not so very large as not to be extremely well known to botanists.

This mysterious black-eye-reducing vegetable can be nothing but the fleshy, black, ovoid root-stock of the black bryony (*Tamus communis*), the sole British representative of the yam (*Dioscorea*).

Its excellence in the treatment of bruises is so well

known that "Beaten Woman's Herb" is one of its popular names.

Nature, it is said, provides a remedy in the plant world for every injury animals can inflict, from the sting of a bee to the bite of a rattlesnake. In diffusing the black bryony liberally throughout England, nature must have foreseen the Briton's propensity to pugilistic practice, and also the honest costermonger's frequent fancy for jumping on his neighbor. It is quite absent from Scotland and Ireland, nature evidently presuming that the canny Scot will behave himself, and that the cheerful Hibernian will not mind a little thimble like a black eye. The plant extends throughout Europe from Belgium southward, and into Western Asia and Northern Africa, but America, luckily for the professor, was overlooked in the distribution.

The nearest approach to it with us is the w. yam (*Dioscorea villosa*), a species which grows abundantly in the vicinity of this city, and has a somewhat fleshy root-stock, but wholly lacks the fine remedial virtues of *Tamus communis*.

It is proper to add that England enjoys two kinds of bryony, the black and the red. Each is a handsome shrub with red berries and fleshy root-stocks.

The black-eye kind has black root-stocks and leaves with long bristle-like tips. Certainly \$3.00 is not an extravagant fee for the reduction of a black eye, but if anyone wants to go into the business with a \$2.00 limit, here is the requisite information.

New York, August 4, 1887.

Washing Chamois Leather.

SIR,—In a small volume recently published, "Hints for Tricyclists," by Professor Hoffman, under the heading "Chamois Leathers, to Wash," there is the following riddle, which may be useful to others besides cyclists: "The washing of chamois leather is a perfectly easy matter if you only know how to do it. The whole secret lies in a nutshell. Wash the leather with soap and water, and don't use the soap out of it. A leather thus treated will dry as supple as when it first left the currier's hands." Perhaps chemists may find this information useful for themselves and their customers.

Faithfully yours,
SODA ARB.

Pill Ideas.

SIR,—Many years ago I suggested a metal plate being screwed on the pill-roller to carry heat for refractory pills. Would not "Metal's" plan for a metal polisher be unnecessary if a metal bed were used? I have seen a sheet of zinc backed by lead, and screwed on a block of wood.

Yours truly,
HEDER. (48.)

Mr. William Geast Green, defendant in a case reported last week under the heading of Ulverston, asks us to rectify "the gross and damaging errors" in our last issue. These are, first, that he was described as William Geast Ian, and not as above; and, secondly, that we did not show that he claims to have been a partner with Mr. Quarrie, who had sold the preparation in dispute to Mr. Mackenzie, the plaintiff, and not, as alleged by the plaintiff, merely in Mr. Quarrie's service.

DISPENSING NOTES.

[The opinions of practical readers are invited on subjects discussed under this heading.]

Liq. Hæmatoxyli Comp.

SIR,—What is liq. hæmatox. co.? I see the preparation was made at Torquay last. It is as follows:—

Liq. hæmatox. co.	..	..	..	..	5i.
Ac. nitrosi fort.	..	..	..	..	℥ss.

M.

The ac. nitrosi fort. required, I presume, would be nitric acid.

Yours very truly,
BELLADONNA. (10)

An Emulsion Wanted.

§—I recently had the following liniment to dispense. The patient stated that it had been dispensed by some other chemist, and always was a thick emulsion. I have tried several ways, but cannot get an emulsion.

Ol. oliva..	..	..	..	..	3liiss.
Aq. calcis.	..	..	..	..	3liiss.
P. boracis.	..	..	..	..	5℥j.
Glycerini	..	..	..	..	5℥v.
Sp. camph.	..	..	..	..	3℥ij.
Ft. lin.					

ALPHA. (34/43.)

3/5. A. B. C.—The translation of your German Prescription is as under:—

Potass. iodid.	..	..	10	grammes (150 grains)
Palv. succ. glycyrrhizæ dep.	1-5	..	(22	..)
.. rad.	..	..	1-5	.. (22 ..)
Aq. destill.	..	..	q.s. ut fr. s. a. pñal. no. 100.	

One to be taken every two or three hours. After four or five days, one to be taken three times daily.

Amyli nitrit. 80 grammes (℥ij.)

F. inhalation:—

Nitrate paper 1 sheet

LEGAL QUERIES.

3/1. H. O. H.—You can only become a chemist and druggist by passing the examinations of the Pharmaceutical Society.

3/4. March.—The makers of vaseline are no doubt the exclusive owners of that word. But if you buy vaseline from them in bulk there can be nothing to prevent you from selling it, or preparations of it, in smaller bulk, labelling it as *th.* Of course if they could prove that you sold as "vasine" some other article than theirs they would have a good case against you for infringement of their rights.

3/. X. F. Z.—An apprentice to a chemist and druggist must be ready to take his reasonable share of all the work of the business with which he has associated himself—including Sunday work.

3/7. G. D.—We should judge that the Mother's Friend would be liable to medicine-stamp duty, but that the nary hair-oil would not be. But why take our *opinion* when you can get an official decision by sending your labels in duplicate to Somerset House?

3/4. Orris Root.—It is possible that your card might bring upon you a prosecution, but we should not think a court would regard your announcement as an infringement of the Dentists Act. An unregistered person may not take or use the title "dentist," "dental practitioner," or any name, title, addition, or description implying that he is registered under the Act, or that he is a person specially qualified to practise dentistry. There is no doubt that unregistered persons may sell artificial teeth, and perform all the operations of dentistry, and you do not seem to claim to do more than that. One partner being qualified would not exonerate his unqualified partner, if it could be shown that he did what the Act says an unregistered person may not.

3/23. W. M.—By registration at Stationers' Hall you secure copyright in a literary production. You cannot protect title, or design, or trade-mark by such registration. If your should consider on evidence that the literature on which was sufficiently original to be capable of copyright, you could probably obtain an injunction against persons who might appropriate that literature. The fee for registration is

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formula which have already been published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formula, or replies required, are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

Embrocation (Elliman's).—See page 269 of current volume. (32 8. A Country Chemist.)

Books for the Minor.—See page 93, January 21. (31, 63. J. M. C.)

Chillie Paste.—See page 502 of last volume. (24, 59. Joz.)

Cucumber Cream.—Vol. xxxi. page 824.

Liquid Blacking.—Current volume, page 235. (24 4. X. F. Z.) (You can get naphthalin at a few pence per lb.)

28 17. E. E. W.—The pink colour of carbolic powder is due to decomposition of the phenol. Rose pink, mixed with the colourless powder, will impart a similar tint.

28 69. R. C.—Flake White is white lead. The finer kinds of it are made by elutriation of the ordinary kind.

28 4. W. & K.—Black Reviver for Kid Leather.—The following has been recommended:—The whites of two eggs; simple syrup, $\frac{1}{2}$ oz.; methylated spirit, $\frac{1}{2}$ oz.; oil of wintergreen, 2 drops; black logwood ink, 8 oz. Beat the first four well together and add the ink.

31 33. Tul'hairn.—To remove the rust from the handle of the bicycle use either Brooke's soap or sapollo. This affects the silver very slightly.

28 15. W. J. M.—Peroxide of hydrogen is applied to the hair after the head has been well washed to remove grease. The 10 vol. article is generally used.

24 49. Metal.—An analysis by Boström and Pondich showed that the *Morchella esculenta* contains a poisonous principle, which has recently been isolated by Böhm and Kulz, and named by them helvellic acid. We are not aware that the odorous principle has been isolated.

32 20. Constantia.—We have your note, but not the sample.

31 63. J. M. C.—(1) Please write to the authors of the postal system for full information regarding it. (2) Examinations for L.D.S. A curriculum of two years' study, including practice at a dental hospital, and two examinations, comprising anatomy, physiology, pathology, surgery, chemistry, materia medica, and various dental subjects, have to be gone through before you can be registered as a dentist. There are examining bodies in England, Scotland, and Ireland. For full information see our educational number, September 17, 1837.

31 73. Cinnamon asks: "What is the meaning of the Numbers on Convex Spectacles?" Convex glasses are generally numbered according to their focal distance in inches, the sights varying from + 8 to + 36, or even more. The numbers on concave glasses indicate that the lenses will exactly neutralise the similarly numbered convex lenses, e.g., - 12 will neutralise + 12. In the dioptric system, used on the Continent, and by many advanced oculists in this country, the unit of focal distance is the metre, and the numbers are awarded in inverse ratio of the distance. Thus a focal distance of half a metre is numbered 2, a quarter of a metre 4, and so on. The scale begins with .25 (= 156 focal inches)

and runs up to 20 dioptries (= 1.95 focal inches). It follows from this that the rule for working English numbers into the measurements of the dioptric system is simply to divide the number of inches in a metre (39.33) by the number of the lense in focal inches.

32/8. *A Country Chemist.*—Devonshire Oil.—Dissolve 1 lb. of soft soap in a gallon of water, and add $1\frac{1}{2}$ oz. of red bole, or sufficient to colour. This is the emulsifying solution, 8 oz. of which are to be added to a mixture of oil of turpentine, 10 oz.; liq. vol. c.c., 1 oz.; tincture of opium, $\frac{1}{2}$ oz.; and spirit of camphor, $\frac{1}{2}$ oz.

30/27. *Derry.*—To prevent the separation of the stearoptene anisol from oil of aniseed the addition of 10 per cent. of rectified spirit has been suggested, and this serves to keep the oil liquid. Of course such oil should not be sold.

31/35. *B. U. C.*—If you do not have a steam-jacketed pan at your disposal, the next best thing for melting the resin is a gas-stove. The heat of a water-bath is not sufficient to melt resin. The only way to prevent it becoming stringy when melted is to keep up the heat.

32/9. *Peccalilli.*—It is obvious that the quantity of Otto of Rose intended in the formula for making the hair curl, given on page 843 of our issue of December 31, 1887, is 5 minims.

Elber Root.—*Ivan* (32/25) writing from Church, says:—"I have been asked here for hellebore under the names of elber, elver, and several other synonyms."

G. B. of S. (35/34) also writes:—"Having undergone a long curriculum in the Yorkshire and the Isle of Wight dialects, perhaps I may be allowed to suggest to your correspondent that 'hellebore root' was intended for 'elber root.'"

33/14. *J. W.*—Dogs do not like cayenne pepper, and if you have any of it sprinkled round your door they will, when they come sniffing around, select another spot for their operations. To any obstinate cur who is proof against the capsicum, offer gently and persuasively a little puff of cotton wool upon which a few drops of liq. ammon. fort. have been placed. One sniff of this produces a bolt which is truly marvellous, and the dog will never trouble you again on this side of time. So you may weed out your enemies.

32/45. *Druggist* (Belfast).—We have frequently explained that spirit of nitrous ether and iodide of potassium cannot go together in a mixture without decomposition taking place. You will find the matter very fully explained on page 821 of our issue, December 18, 1886. The addition of a considerable excess of an alkali prevents the liberation of iodine.

Samohit (34/37) would like to know what cement or other preparation he could use to affix glass tablets, 3 feet 6 inches long by $4\frac{1}{2}$ inches wide, on the outside of his shop windows.

34/36. *Vin. Ipecac.*—A microscope suitable for a Minor student should be fitted with 1-inch and $\frac{1}{4}$ -inch objectives and one eye-piece. Such an instrument costs about four guineas, or with a triplet objective about three guineas. Consult the advertisements in our Diary, and write to any of the advertisers, who can be relied upon.

195/30. *W. H. A.*—Carboy Colours.—*Red*: Potass. sulphocyanid., gr. x.; liq. ferri perchlor. fort., m. x.; aq. destil., cong. 1. This is fugitive, but not so the solution of 1 oz. of nitrate of cobalt and carbonate of ammonia q.s. to a gallon.

Blue: Sulphate of copper, 1 oz.; strong solution of ammonia, 4 oz.; water, 1 gallon. *Green*: Sulphate of nickel, 1 oz.; sulphuric acid, 3 oz.; water, 1 gallon. We never heard of a white colour for carboys. An opalescent colour may be made by adding to each gallon of water 30 minims of pimento oil and 1 oz. of rectified spirit, and exposing to air.

35/14. *Bouquet.*—The following has been given as a formula for Kalydor:—Bitter almonds, 100 grms. rose-water, 500 grms; make an emulsion s. a., and add it a solution of 0.1 gm. of perchloride of mercury, 7.5 grms of sal ammoniac in 15 grms. each of cherry laurel water and rectified spirit. (2) Alcohol is deodorised by distilling from a mixture of animal charcoal 4 oz. and acetate of soda 1 oz. to each gallon of spirit. Or you may do it less effectually, though sufficient, by shaking 3 or 4 grains of permanganate of potash with each pint, and allowing to stand until perfectly bright and water-white.

35/17. *A. P. S.*—The Specific for Drunkenness which you send contains liquorice, mace, ginger, fenugreek, capsicum, and other aromatics. We cannot give you the proportions.

35/54. *Bad Luck.*—Fragrant Dentoline.—Reduce the quantity of oil of wintergreen to 10 or 15 minims, and add 4 oz. of rectified spirit. Mix all the ingredients except the cochineal; shake well with a few drachms of powdered pumice, and filter.

35/45. *Reader.*—You will find a note on the manufacture of Nutrient Suppositories in our issue of July 3, 1887, page 141. For the extract of meat there ordered you may use any good extract, plain or, preferably, peptonised. The gelatine basis is generally used.

35/39. *F. C.*—To remove the stains of aniline mixing-ink from linen, damp the spots with acetic acid, then with a 2 per cent. solution of nitrite of soda; wash well, and repeat if necessary.

35/50. *Leo.*—One pound of sulphate of copper is used for pickling six bushels of wheat.

35/42. *W. G. D.*—Tobaggan's Ticket-writing Ink will run into the paper if the paper has not previously been sized and dried. We gave a formula for a water-ink some weeks ago. If you are careful to size the paper well, what better "ink" can you have than Berlin black?

32/17. *Roche.*—*New Idea* gives the following the result of an analysis of a well-known English tooth-paste:—

Powdered cloves	60 grains
" cinnamon	60 "
"orris root	100 "
Precipitated chalk	200 "
Powdered pumice stone	100 "
Oil of cloves	6 drops
Otto of rose	1 drop
Ammoniacal carmine solution, 10 drops	
or q.s. to give deep red colour	
Honey, q.s. or about	400 grains

30/57. *J. March.*—Carbolic Tooth paste:—

Precipitated chalk	4 oz.
Carbonate of magnesia	1 "
Carbolic acid	20 minims
Oil of wintergreen	4 drops
Saccharin	1 grain
Glycerine	6 drachms
Water	q.s.

Make a paste.

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WITH VITRIFIED (burnt in) LABELS

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Labels indestructible and of elegant appearance, forming an even surface with the glass or porcelain. The Jars of best porcelain, thoroughly greaseproof. The Bottles hand-made and of superior quality. Both are unsurpassed by anything in the market in every respect. Also a CHEAPER sort of Bottles and Jars, with labels equally indestructible, but very plain, especially suitable for Dispensaries, &c. Intending Buyers are requested to inspect Samples at

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PRESENTED GRATIS
TO EVERY PURCHASER OF A 1/- BOTTLE
A ROYAL LINEN MARKER IN A CASE

OR TWO SETS OF INDIA RUBBER ALPHABETICAL LETTERS, PAD & HOLDER
THE GENUINE LABEL HAS THE WORDS, PREPARED BY THE
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In each drachm			In each drachm		
Antyryn (5 grs.)...	*Bismuth and Iron
Bismuth and Pepsine	(4 grs.) (4 grs.)
(4 rs.) (4 grs.)	...	...	*Bismuth, Iron, and Strychnia	...	...
Bismuth, Pepsine, and Quinine	...	...	(4 grs.) (4 grs.)	($\frac{1}{60}$ gr.)	...
(4 rs.) (4 grs.)	(1 gr.)	...	*Iron and Arsenic	...	...
*Bismuth, Pepsine, and Steel	...	...	(4 grs.) 3 mins. (Fowler's Solution)	...	...
(4 rs.) (4 grs.)	(4 grs.)	...	*Iron and Pepsine	...	...
Bismuth, Pepsine, and Strychnia	...	...	(4 grs.) (4 grs.)	...	...
(4 rs.) (4 grs.)	($\frac{1}{60}$ gr.)	...	*Iron, Quinine, and Strychnia	...	...
*Bismuth, Iron, and Quinine...	...	...	*4 grs.) (1 gr.)	($\frac{1}{60}$ gr.)	...
(4 rs.) (4 grs.)	(1 gr.)	...	Iron, Quinine, and Pepsine...	...	...
			(4 grs.) (1 gr.)	(4 grs.)	...

* The Ammonio-Citrate of Iron is used in these preparations.

They are supplied in any quantity, from 2 oz. upwards.

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CRYSTALS, POWDER, OR GAZOGENE CRYST.

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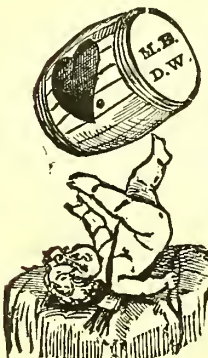
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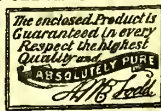
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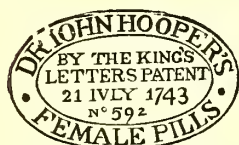
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The only Gelatine Coated Oval Pills of ENGLISH MANUFACTURE in the Market. Special List on application.

	Gross Botts.		Gross Botts.		Gross Botts.
Bismuth.		Ferri Hypophosph. Comp.		Hydrarg. et Arsenic. Iodid	
(Wyleys'), B. Bismuth, Nit., 2		(Wyleys'). Each pill represents		(Wyleys'). Each pill equivalent	
gr.; Pepsin Porci, 1 gr.; Ferr.		1 fluid drachm of Syrup of the		lent to 5 minims of Donovan	
Redact., 1 gr.; Strychnin, $\frac{1}{24}$ gr.	3/6	Hypophosphites... ..	2/6	Solution	18
Calcil Sulphid. $\frac{1}{10}$, $\frac{1}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, 1 gr.	1/8	Ferruginous (Bland's), 3 and		Manganese Binoxid Pur. , 1 gr.	2/6
Cascara Sagrada (Ext.), 2 gr.	2/-	5 gr	1/8	Phosphorus , $\frac{1}{80}$ Ext. Nuc	
Ergotin. Comp.		Ferri Quininæ et Strych-		Vom. , $\frac{1}{4}$ gr.	2/-
B. Ergotin, 1 gr.; Ferri Sulph.		ninæ Phosph. (Wyleys'), re-		Podophyllin Resin , $\frac{1}{2}$ gr.; Pil	
Exsic., 1 gr.; Ext. Hellebor.,		presenting Easton's Syrup ...	3/-	Rhei Co. , 4 gr.	2/6
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which is in great demand.Send to your Wholesale Dealer for
price, and put in Stock.**RETAIL PRICES in FUTURE,****2s. 6d. & 4s. 6d.**

VOID CAPSULED PILLS

A large, dark glass bottle with a textured surface. The bottle is filled with numerous small, light-colored, rounded objects, possibly seeds or small stones. A label on the left side of the bottle reads "USE IN DRY BOTT". The bottle is shown from a slightly low angle, emphasizing its height.

DOZ. BOTTLES		DOZ. BOTTLES	
containing 25 PILLS.	containing 100 PILLS.	containing 25 PILLS.	containing 100 PILLS.
7/	24/	Ipecac. Powdered	1 gr. 5/
7/	24/	Iron, Arseniate	1 gr. 16/
5/	16/	Mercury Bin-Iodide	1-16 gr. 18/
6/	20/	" Proto-Iodide (absolutely pure pre-	5/
7/	24/	cipitated)	1 gr. 16/
11/	39/6	" Proto-Iodide	1 gr. 5/
7/	24/	Morphine, Muriate	1 gr. 16/
7/	24/	"	7/
7/	24/	Nitro-Glycerin	1 gr. 24/
5/	16/	"	1-100 gr. 32/
5/	16/	Picrotoxin	1-50 gr. 7/
7/	24/	Podophyllin	1-80 gr. 24/
7/	24/	"	1 gr. 5/
6/	20/	"	1 gr. 16/
6/	20/	Quinine, Bi-Sulphate	1 gr. 5/6
6/	20/	"	1 gr. 5/
6/	20/	" Sulphate	1 gr. 18/
7/	24/	"	1 gr. 18/
7/	24/	Strychnine	1-50 gr. 6/
5/	16/	" Nitrate (Dipsomania)	1-60 gr. 5/
5/	16/	Zinc Phosphate	1 gr. 16/
5/	16/	"	1 gr. 7/
7/	24/	" Valerianate	1 gr. 9/
13/	47/6		8/6 30/

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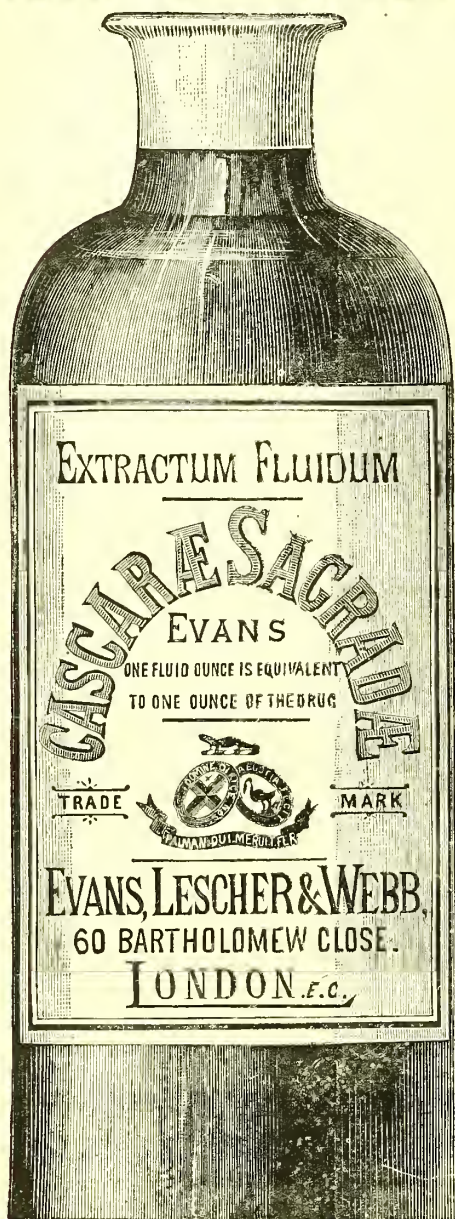
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Cholera, Diarrhoea, Dysentery, Dyspepsia, Gastralgia, Colic, & all Catarrhal Affections of the Bowels. For Coughs, Colds, Influenza, Bronchitis, Asthma, & all Catarrhal Affections of the Lungs. For Hay Fever, Intermittent Fever, Ague, Neuralgia, & all ailments caused by adverse weather influences.

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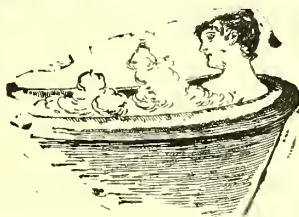
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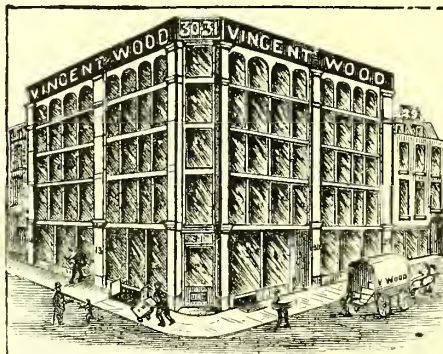
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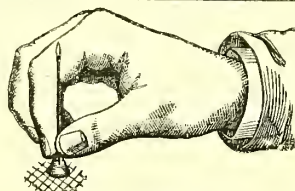
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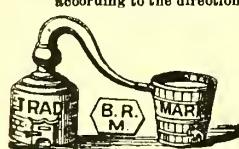
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" Camphoræ " 4/ "	" Flor. Aurant. " 8/6 "	" " " 4/ "	" Rose Virgin " 10/6 "
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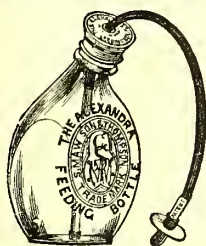
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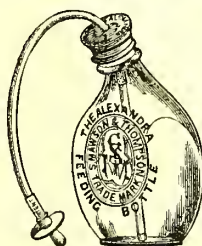
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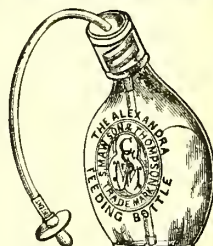
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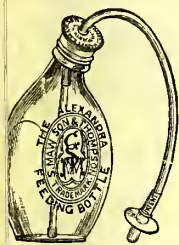
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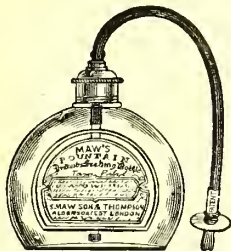
Alexandra Feeding Bottle,
Earthenware Cap,
11/ per doz.



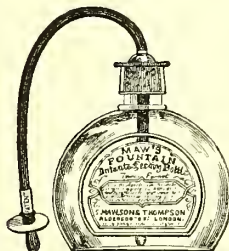
Alexandra Feeding Bottle,
Screw Glass or Earthenware.
Stopper, 11/ per doz.



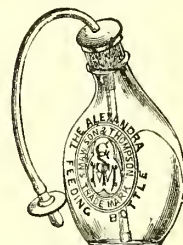
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Fountain Feeding Bottle,
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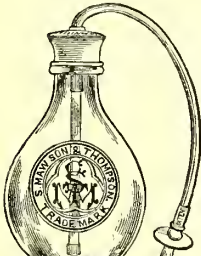
Fountain Feeding Bottle,
Screw Glass Stoppers.
12/6 per doz.



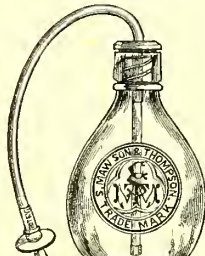
Alexandra Feeding Bottle,
Wood-Top Cork.
3/ and 3/8 per doz.



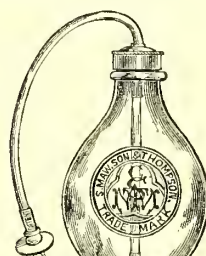
Oval Feeding Bottle,
Earthenware Cap.
8/ per doz.



Export Feeding Bottle,
Earthenware Cap.
7/3 per doz.



Export Feeding Bottle,
Screw Glass Stopper.
7/6 per doz.



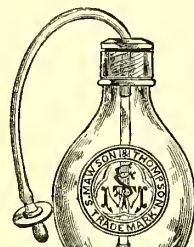
Export Feeding Bottle,
Screw Metal or Earthenware Cap.
9/ per doz.



Export Feeding Bottle,
Metal Cap.
4/6 per doz.



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Wood-Top Cork.
2/9 and 3/6 per doz.



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Screw Glass Stopper.
4/ per doz.

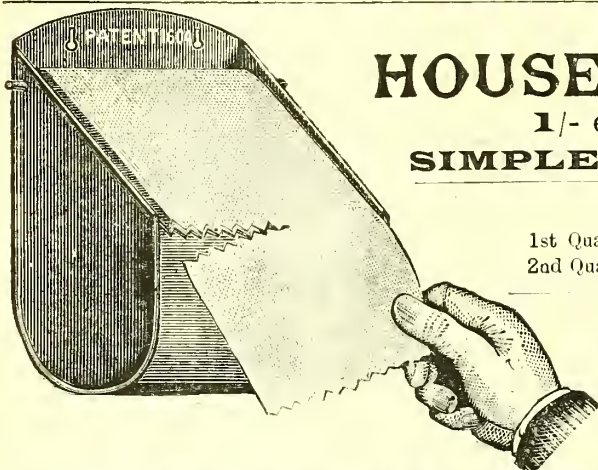


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As we understand from some of our Clients that, from false representations made, an impression prevails that the proceedings in these actions have failed, we beg to inform the public that such is not the fact, and that the proceedings are being carried on as fast as possible, in the Chancery Division of the Court, to restrain the Defendants from selling or making Tins similar to those manufactured by us, and from infringing our Patents. The Defendants, pending the proceedings, have been ordered by the Court to keep an account of all sales made by them. Our Solicitors, Messrs. CLARKSON, GREENWELL & Co., have had instructions from us to proceed against all persons so offending.

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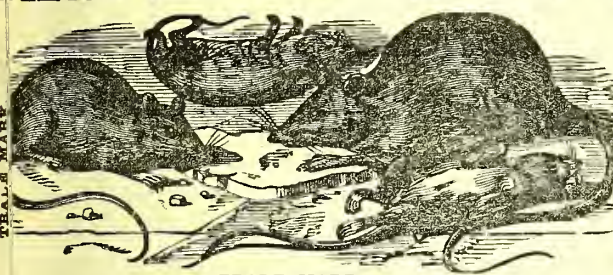
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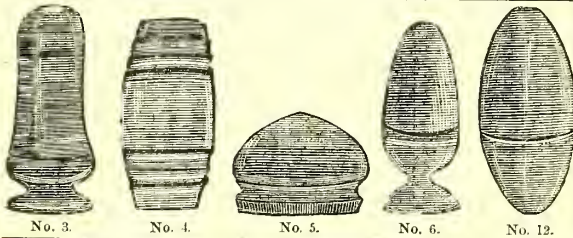
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We have arranged with a first-class Die-sinker to supply us with a large quantity of name-plates at a uniform charge of seven shillings each, irrespective of the number of letters required. You can now have your Name, Business, and Address stamped on each Block, at no extra charge beyond the cost of name-plate, seven shillings, as above.

Orders received through any of the leading Wholesale Houses. Orders direct to us must in all cases be accompanied by a remittance.

One customer, residing in a town of less than 10,000 inhabitants, has just been supplied with the entire gross, specially stamped.

O.S. Tooth Block, in Patent Metallic Box, retail 1/- each, 7/- per dozen.

**MENTHOL CONES.**

	Per Dozen	
No. 6, Pillar Shape, Polished Whitewood Boxes	2	
" 3, Pedestal " " Boxwood	2	
" 4, Barrel " " " "	2	
" 5, Hat " " " "	3	
" 12, Egg " " " "	3	
Assorted C parcel (3 Gro.), 1 doz. Nos. 3, 4, 5, 12	7	
" D " (1 "), 2 " " 1 " " " "	14	
" E " (1 "), 4 " " 2 " " " "	26	

THE CASTLE MENTHOL CO., 11 FURNIVAL ST., LONDON.

S.V.R.**PURE GRAIN SPIRIT 56 O.P. ... 1/5****Do. Do. DOUBLE DISTILLED 1/9**

Cash with Order. Reductions for Larger Quantities than Two Gallons.

S. S. & Co.'s Speciality for Perfumery. Samples free.

STEPHEN SMITH & CO., BOW, LONDON, E.**PURE SPIRITS OF WINE.**

60 o.p., 20/3 per gall.; 56 o.p., 19/9 per gall.

1/ per Gall. Discount for Cash with order.

Further allowance for quantity. **STEAM STILL ONLY.****GEORGE PHILLIPS & CO.,****ST. ANDREW'S DISTILLERY, CLERKENWELL RD.****LONDON, E.C.****COLTHURST & HARDIN,**BALL DENOTES
COLOUR OF PAINT.

BRISTOL—Manufactories: Phoenix Works and Temple Gate. Offices: Temple Gate. Telams: "Phoenix Bristol."

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IN ALL THE ART SHADES. For all kinds of decoration on Wood or Iron. Dry with a surface like Porcelain. Sold in small large Tins, or in bulk. Prices and shades on application.

WHITE LEAD, ZINC WHITE,**PAINTS & COLOURS OF ALL KINDS.****MIXED PAINTS READY FOR USE,**

In Tins, 1, 2, 4, 7, and 14 lbs. each.

HIGH-CLASS VARNISHES

Of all kinds, for Coachbuilders, Decorators, etc.

OIL BOILERS, REFINERS & MERCHANTS.

Export Orders receive special and prompt attention.

GENUINE EMERY, EMERY CLOTH, AND BLACK LEAD.**JOHN OAKLEY & SONS,**

MANUFACTURERS OF

Glass Paper, Emery and Glass Cloth; Emery, Black Lead, Emery Wheels, Putty Powder, Crocus, Urn Powder, Tripoli, Rouge, Plate Powder, Steel Polish, Furniture Polish, Knife Boards, Brunswick and Berlin Black, &c.

OAKLEY'S WELLINGTON KNIFE POLISH,

Prepared expressly for Oakley's Patent Rubber Knife Boards, Buff Leather Boards, and all the Patent Knife Cleaning Machines. Sold in Canisters with perforated Tops to prevent waste, at 1d., 2d., 3d., 6d., 1s., 2s. 6d., and 4s. each.

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For Cleaning and Polishing Silver, Plate Glass, Marble, &c. Tablets, 6d. each.

OAKLEY'S "POLYBRILLIANT" (Registered).

A Magic Pomade for Cleaning Brass, Copper, Tin, Pewter, Britannia Metal, &c. Never becomes dry and hard like other Metal Pastes. Tins 1d., 2d., 3d., and 6d. each.

WELLINGTON BLOCK BLACK LEAD,

In 1d., 2d., and 4d. Blocks, and 1s. Boxes.

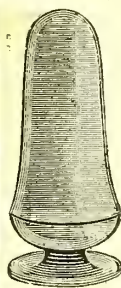
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MENTHOL CONES

GUARANTEED PURE.

No. 4. 4d.



Write for
complete
Price List.

No.	Description	Per 1-Gross	Per 1/2-Gross	Per Gross	All Orders for 1/2-gross & upwards are sent Carriage Paid.
1	Polished Willow-wood Boxes—Pull off lid ..	3/9	6/9	11/6	
2	Do. do. do. Acorn ..	4/9	8/9	15/0	
3	Boxwood Boxes—Screw lid, Pedestal shape ..	6/6	12/3	21/0	
4	Do. do. do. (larger) ..	7/3	13/3	23/0	
5	Do. do. do. Barrel shape ..	7/3	13/3	23/0	
6	Do. do. do. Button shape ..	8/6	16/3	31/0	

SPECIALLY ASSORTED PARCELS SUPPLIED AS UNDER.

ASSORTED PARCEL No. 1 (1/2-GROSS).

	Costing	Selling at
1 doz. No. 1 at 1/2-gross price ..	1/3	2/0
1 " " 2 " " " ..	1/7	3/0
1 " " 3 " " " ..	6/8	10 1/2
1 " " 4 " " " ..	7/4	1/0
1 " " 5 " " " ..	7/4	1/0
1 " " 6 " " " ..	8/4	1/6
3 doz. costing 5/3, retailing 9/4..	5/3 1/2	9/4 1/2

Being a profit of 4/1, namely 77 per cent.

ASSORTED PARCEL No. 2 (1/2-GROSS).

	Costing	Selling at
2 doz. No. 1 at 1/2 gross price ..	2/3	4/0
2 " " 2 " " " ..	2/11	6/0
1 " " 3 " " " ..	1/0 1/2	1/9
1 " " 4 " " " ..	1/1 1/2	2/0
1 " " 5 " " " ..	1/1 1/2	2/0
1 " " 6 " " " ..	1/4 1/2	3/0
6 doz. costing 9/9, retailing 18/9.	9/9	18/9

Being a profit of 9/0, namely 92 per cent.



No. 5. 4d.

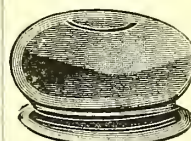
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Please cross all
cheques, and make
them payable to the
**MIKADO MENTHOL
COMPANY.**
Being in the suburbs
of London, labour and
rent is cheaper, the
benefit of which we
give to our customers

ASSORTED PARCEL No. 3 (1 GROSS).

	Costing	Selling at
3 doz. No. 1 at the rate of 11/6 per gross	2/10 1/2	6/0
3 " " 2 " " " ..	3/9	9/0
1 1/2 " " 3 " " " ..	2/7 1/2	5/3
1 1/2 " " 4 " " " ..	2/10 1/2	6/0
1 1/2 " " 5 " " " ..	2/10 1/2	6/0
1 1/2 " " 6 " " " ..	3/10 1/2	9/0
12 doz. costing 18/10, retailing 41/3.	18/10 1/2	41/3

Being a profit of 22/5, namely 119 per cent.

A sample of
each of the six
shapes of the
"Mikado" cones
sent post free for
1/3. Send for this
set of samples
and judge of the
quality & cheap-
ness of our cones.



No. 6. Retail
6d. Price.

THE MIKADO MENTHOL CO., 5 ANSTEY ROAD, PECKHAM RYE, LONDON, S.E.

FINEST SUBLIME OLIVE OIL

35 to 40 gallon quarter casks, 5/6 per gallon (casks free); ditto in
12-gallon tins, 5/9 per gallon (tins charged and returnable).
TERMS: Quarterly or current journey account, less 2 1/2 per cent., or Cash,
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OFFERED BY

A. & J. WARREN,

Wholesale and Export Druggists, Licensed
Makers of Methylated Spirit,
23 & 24 REDCLIFF STREET, BRISTOL.

N.—The shipments of the above article have hitherto given great
satisfaction, it being very different to the so-called Sublime Olive Oil offered
by many Oil Houses, while at the same time the high prices often required
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Messrs. A. & J. WARREN are Proprietors of

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A REMEDY FOR SKIN DISEASES.

1s. 9d. per lb. In 4-lb., 7-lb., and 14-lb. tins (tins free). A sample 2-lb. tin
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Established nearly 40 years. Registered Trade Mark.

INVALUABLE FOR RHEUMATISM AND WEAK JOINTS.

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1s. 2d. 7-lb. boxes, 9s. 6d.; 2s. or 14-lb. boxes, 18s.; 4s. or 28-lb. bags, 36s. per dozen;
6s. or 56-lb. bags, 72s. per dozen; 16s. or 112-lb. bags, 144s.

ALL Veterinary Rights purchased March 15, 1886. Terms—Monthly account, less
10 per cent.; a reduction on 6-cwt. and 10-cwt. lots. Carriage paid on orders
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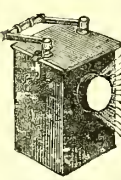
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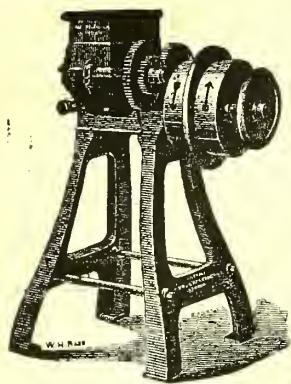


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Advertised in "Bell's Life" 54 years. Beware of Spurious Imitations.



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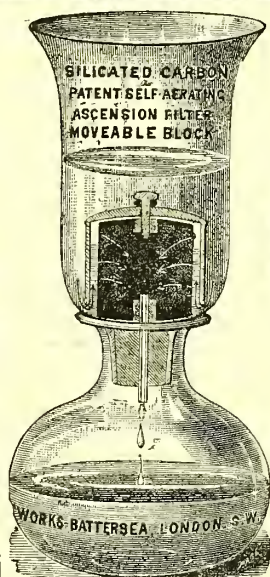
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LIBERAL DISCOUNT TO THE TRADE.



Glass Table Filters.

So commonly the result of Drinking Unfiltered Water
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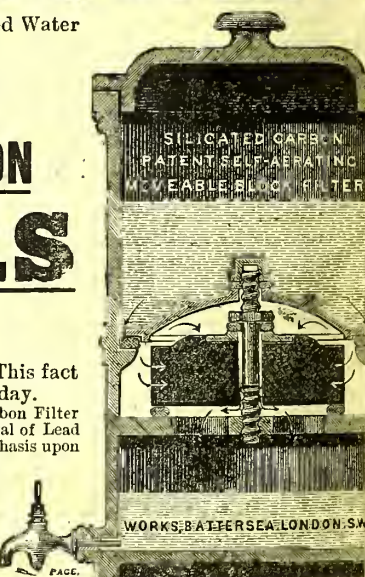
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IN RUBY, BLUE, AMBER, AND OPAL GLASS.

Send particulars of size, subject matter, and colour, when price for one Tablet and upwards will be sent.

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TO PREVENT FRAUD, DEMAND BUSINESS CARD FROM TRAVELLERS.**

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GELATINE PILL-COATING MACHINE.

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SMALL MACHINE TO COAT 96 PILLS EACH TIME, £3 3s.

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TOOTHACHE PELLETS

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Cure Toothache when everything else fails. Do not burn. Tubes containing Four Pellets are sold at 1s. 1½d.

Wholesale on usual terms of Barclays, Newberrys, Suttons, Sangers, Hovendens, London; John Thompson, Liverpool, &c.

N.B.—ARE INVALUABLE TO DENTISTS PRIOR TO STOPPING.

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GLOY FOR LABELLING, &c.

Cheaper, cleaner, and more adhesive than gum, paste or dextrine. Never decomposes in any climate.

Price 12s. per cwt., equal in solution to 3d. per gallon.

Agents wanted. Gold Medals and numerous Testimonials.

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From PURE JAMAICA GINGER ROOT.
SELTZER, POTASS, LITHIA, SODA WATER, LEMONADE,
FOR HOME OR EXPORT.

PERFUMES, No. 30.

FIFTY KINDS.

9s. for 20 oz., Carriage Paid.

Samples of any kind for 2 stamps.

When buying, compare my Perfumes with other makers', and buy the best.

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To all those of either sex who have lost or are losing their Hair.

**CAPPER'S
CRINIDONE,** THE HAIR
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WILL PROVE A BOON

Thousands of living Testimonials testify to the efficacy of "CRINIDONE." In bottles of 1s. each. Wholesale Agents—EVANS, SOHS & CO., Liverpool.

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Send for prices and samples.

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Critchley's Starch Gloss

Makes Starched Linen like new. Does not stick to spider-like Materials. Once tried always wanted. Used in the Royal Laundries. Sold everywhere, in Packets, 1d., 3d., 6d., and 1s. each. Write for quotations.

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Sole Proprietor and Manufacturer,

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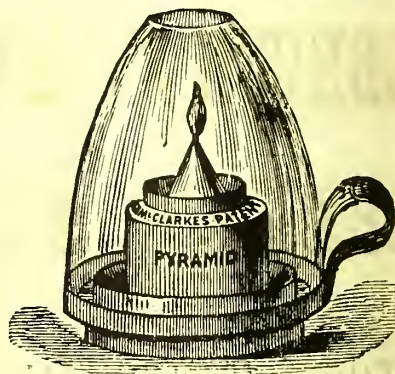
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THE BIRMINGHAM VINEGAR BREWERY COMPANY,
Limited, have for many years been the Sole Manufacturers
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The attention of the Company having been drawn to certain advertisements and other documents which have been circulated in the Trade, that the Public are invited to purchase these articles from persons other than the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, have already commenced legal proceedings to protect the exclusive rights which they claim to these articles. The Public and the Trade are warned that any of the above articles purchased under this Brand from any Manufacturers except the BIRMINGHAM VINEGAR BREWERY COMPANY, Limited, will not only be spurious, but may expose the person retailing the same to the risk of being made Defendant to legal proceedings.

SAMUEL CLARKE'S PATENT "PYRAMID" NURSERY LAMP FOOD WARMER.



PATENT
"PYRAMID" NIGHT LAMPS, 6s. per doz., Lacquered or Bronze
AND
"PYRAMID" NIGHT LIGHTS, 7s. 6d. per doz. box
Less 5 per cent. Cash.
8 Lights in each Box, burn 9 hours each.

The "Pyramid" Night Lamps render the burning a Night Light perfectly safe, entirely prevent FLICKERING (so objectionable in all Night Lights not burned in a Lamp), are clean, portable, and render a Night Light useful for many purposes where they otherwise could not be.

The "Pyramid" Food Warmers, by their peculiar construction—the glass chimney conducting and concentrating heat to the bottom of the water vessel—a larger amount of LIGHT and HEAT is obtained than can be in any other lamp of the same class. Without smoke or smell.

The "Pyramid" Night Lights are made much larger than any other Night Light, and give double the light; they are, therefore, very suitable for nursery lamps, lighting passages, lobbies, &c., and adaptable to many purposes for which the common Night Lights are useless.

DIRECTIONS FOR USING THE PATENT "PYRAMID" FOOD WARMER AND NIGHT LIGHTS.

The food which is required to be kept hot to be placed in the porcelain panakin, and water in the tin vessel—just sufficient to admit of the porcelain panakin being placed therein. Care should be taken in lighting the Night Lights not to injure the top, which is a protection for the wick, but simply apply a lighted match or taper, and allow the material to melt away.

	RETAIL.	WHOLESALE.	REDUCED PRICES—NET CASH.	
No. 1 Holds Half-pint Food, besides Water, price	3s. 6d. each	30s. per dozen	27/- per dozen	Less
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No. 3 " One Pint Food " "	6s. 0d. " "	42s. " "	33 " "	for
Clarke's Hot Water Lamps " "	2s. 6d. " "	20s. " "	18 " "	Cash
" "Pyramid" Night Lamps " "	1s. 0d. " "	8s. " "	6 " "	
" " " " Lights " "		7s. 6d. " "		

CAUTION.—The Patentee, in reply to numerous consumers, begs to state that he will warrant his PATENT "PYRAMID" FOOD WARMERS to answer the purpose for which they are recommended only when the "Pyramid" Night Lights are burned in them; the common night lights will not give sufficient heat. Persons who find a difficulty in obtaining the "Pyramid" Night Lights in good condition are requested to write to the Patentee, S. CLARKE, Patent "Pyramid" Night Light Works, Cricklewood, London, N.W., who will give the address of his nearest agent. "Pyramid" Night Lights are best when newly made; the "Pyramid" Food Warmers are sold by all respectable dealers throughout the Kingdom, at 3s. 6d., 5s., and 6s. each.

N.B.—EXTRAS.—Porcelain Panakins, No. 1	8s.	Lids	2s. per dozen.
No. 2	9s.		3s. "
No. 3	10s.		4s. "
Tin Panakins, No. 1, 8s.	No. 2, 10s.	No. 3, 12s.	per dozen.
Clear Glasses, 4s.	Roughed, 6s.	Opaline, 6s.; Coloured, 6s.	per doz.

PATENT "PYRAMID" NIGHT LIGHT WORKS, CRICKLEWOOD, LONDON, N.W.

N.B.—See that the Trade Mark, "PYRAMID," is on every Lamp and Light.

EIGHT PRIZE MEDALS AWARDED.

**GOODALL'S
HOUSEHOLD SPECIALITIES.****Yorkshire Relish**

THE MOST DELICIOUS SAUCE IN THE WORLD.

Chops and Steaks, Fish, &c., it is incomparable. 1n Bottles, 6d., 1s.
2s. each.NOTICE.—On each Yorkshire Relish Label is a Willow Pattern Plate
name, GOODALL, BACKHOUSE & CO. No other is genuine.**Goodall's
Baking Powder**

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and
light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and
3s. each.**Goodall's
Quinine Wine**The best, cheapest, and most agreeable tonic yet introduced. 1n
Bottles, 6d., 1s., and 2s. each.**Goodall's
Custard Powder**Makes delicious Custards without Eggs, in less time and at half the
cost. Sold in Boxes, 2d., 6d., and 1s. each.**Goodall's
Blanc Mange Powder**Acknowledged by all to be the most convenient and economical pre-
paration ever introduced, as, by its use, a most Rich and Delicious Blanc-
mange may be produced in a few minutes at a trifling cost, and may be
had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and
Vanilla. Sold in Packets, 6d. and 1s. each.**Goodall's
Egg Powder**Acknowledged to be the only real substitute for eggs yet discovered. Its
action on Oakes, Puddings, &c., &c., resembles that of the egg in every
particular, enriching them in colour and flavour, rendering them most
wholesome and nutritious. One sixpenny tin will go as far as twenty five
eggs. In 1d. Packets; 6d., 1s., 2s. Tins.

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WHITE HORSE STREET, LEEDS.A Monthly Price List of Druggists' Sundries,
Patent Medicines, &c., can be had Post
Free on application.

GOLD MEDAL, EDINBURGH, 1886.

SEALING WAX.

(LION BRAND.)

DISPENSING, PARCEL, POSTAL, & BOTTLING WAX
OF EVERY DESCRIPTION.This article could be profitably dealt in by Chemists
and Druggists.

Show Cases filled with Stock, from 12 6.

Special facilities and terms to Wholesale and Export Houses.

GEORGE STEWART & CO., SEALING WAX
MANUFACTURERS
Edinburgh; and 3 Dyer's Buildings, Holborn, LONDON.**HIGH-CLASS PERFUMERY**

"Messrs. J. ATKINSON & Co.'s

PERFUMES are in aroma and

strength particularly fine."

Chemist & Druggist,

Jan. 29, 1887.

J. ATKINSON & CO.
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REGISTERED
"ZENITH"
BRAND PERFUMES.
Samples and quotations on application,
at their only address,**5 FINSBURY SQUARE, LONDON.****SHIPKOFF & CO.****OTTO OF ROSE**MANUFACTURERS & MERCHANTS,
KIZANLIK, BULGARIA.

VIRGIN OTTO ONLY DEALT IN.

REPRESENTED IN ENGLAND BY

GEO. P. BAKER, 19 Ivy Lane, Newgate St., London, E.C.**FABRIQUE**

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(VAR, FRANCE).

Flower Pomades. Perfumed Oils. Flower Extracts.
Essential Oils. Distilled Waters, &c., &c.

OF ALL WHOLESALE DRUGGISTS, OR WHOLESALE ONLY OF

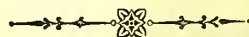
R. C. TREATT, Dunster House, Mincing Lane, London.



LAZENBY'S HARVEY'S SAUCE

FOR
FISH, GAME, STEAKS,
&c.

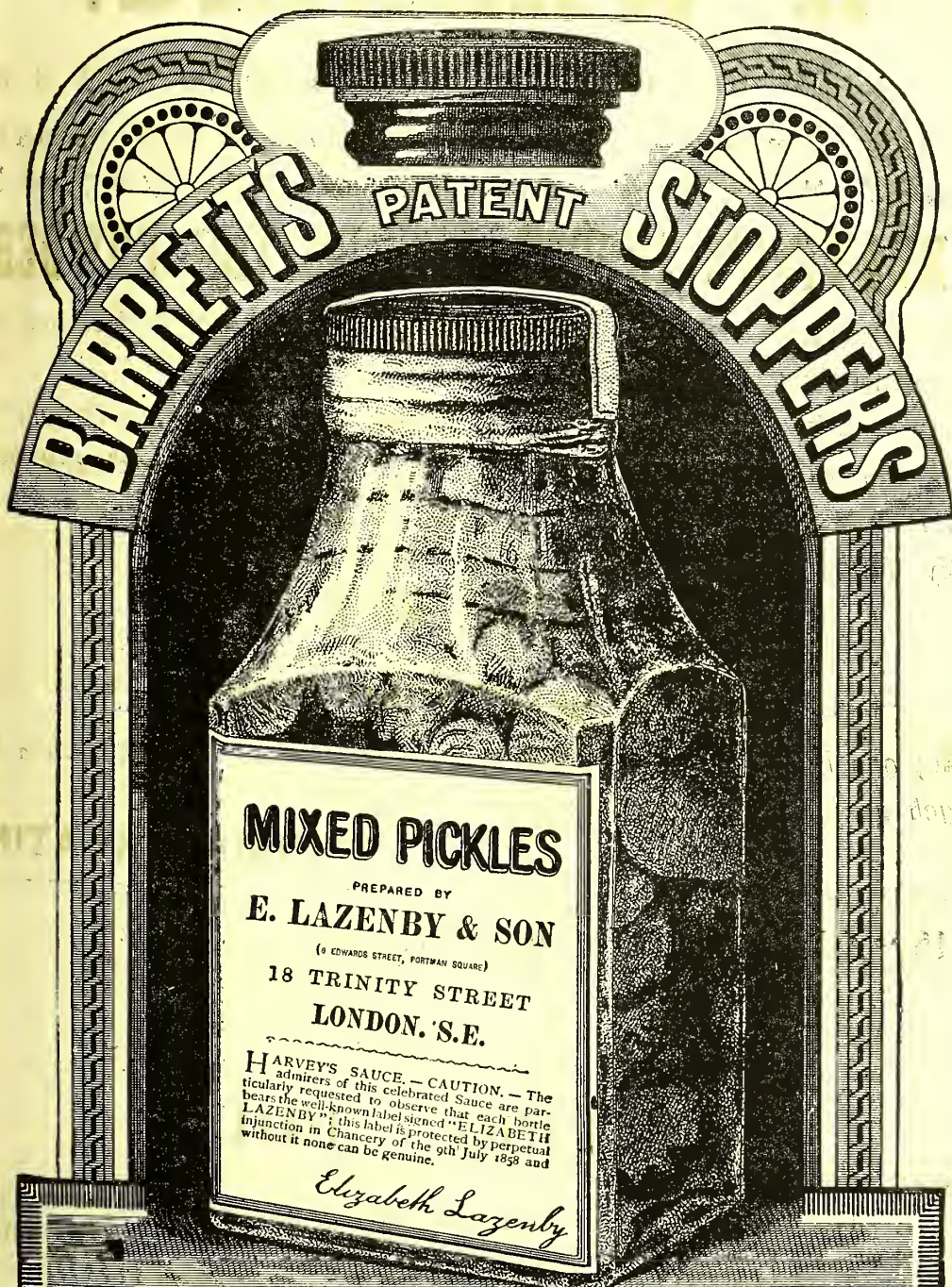
In use for now nearly
a century.



CAUTION.

Each bottle of the celebrated Sauce prepared from the ORIGINAL RECIPE bears the well-known Label signed "Elizabeth Lazenby," without which none can be genuine.

.....
E. LAZENBY & SON,
18 Trinity Street,
LONDON. S.E



AGENTS FOR THE UNITED KINGDOM
E. LAZENBY & SON, LONDON.

A WARNING.

1 London House Yard, London, E C., March 20, 1888

I beg to call especial attention to the case referred to below. In that action the Plaintiff's Manager swore, and his affidavit was in no way disputed, that—

KEATING'S INSECT DESTROYING POWDER

is quite harmless to animals and human beings, and that it does not contain any substance that is poisonous to either.

I take this opportunity of again stating that "Keating's Powder" is a special preparation, different from, and not to be compared with, any so-called Insect Powders which give so much dissatisfaction to customers.

—My Trade Mark, registered October 11, 1876, is—

KEATING'S

PERSIAN

INSECT DESTROYING POWDER.

Any one infringing this I shall at once proceed against, as such a step is as much an injury to the whole trade as myself.

THOMAS KEATING.

In the High Court of Justice.

CHANCERY DIVISION.

MR. JUSTICE NORTH.

26th October, 1886.

KEATING v. POLL.

IT WAS ORDERED:

That the Defendant be perpetually restrained from stating or causing to be stated that Keating's Persian Insect Destroying Powder contains **any substance poisonous to animals or human beings**, or from making any statement to the effect that such Powder is dangerous to animals or human beings.

IT WAS FURTHER ORDERED:

That the Defendant, William Sheppard Poll, do pay to the Plaintiffs their costs of this Action.

NOTICE.—*Chemists who make statements to customers defamatory of Keating's Insect Powder will be summarily proceeded against.*



LYNCH'S IMPROVED

PRIZE MEDAL,

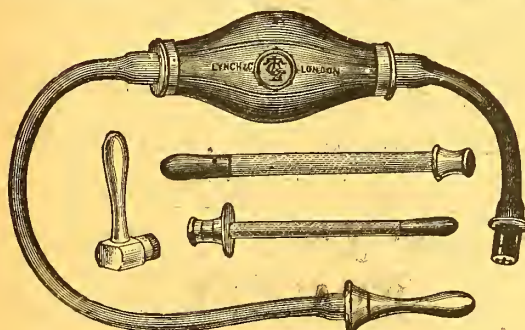


SYDNEY, 1879.

FAMILY ENEMA

(Patent 13,816, dated 12th October, 1887).

In
Mahogany Box
Lined
with Velvet,
per dozen,
49/-



In
Slide Cedar Box,
per dozen,
43/-

Less usual Discount.

LYNCH & CO. have long recognised the imperfect nature of the Valves hitherto employed in the construction of Enemas, and their liability to destruction from contact with greasy matter, from clogging, and even in some cases actually rusting in the Rectal Chamber.

In the employment of Glass they have secured a material not only free from the foregoing defects, but combining all the essentials of incorrodibility, cleanliness, and perfect continuous action.

The Valves are so situated, being placed at the extremity of both inlet and delivery tubes, as to admit of their ready removal and replacement, if desirable; and being within the Indiarubber are perfectly protected from any possibility of breakage.

The simplicity of the Apparatus, the entire absence of complication, and the extremely moderate price warrant the Inventors in hoping for its universal adoption.

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AUSTRALIAN BRANCH—15 Vaughan's Chambers, 48 Queen Street, MELBOURNE.

SHOWROOM.

We have now completed the restoration of our premises, and shall be pleased to see any of our country friends visiting London. Our Showroom contains samples of all state goods and the most recent novelties, and we are fain to hope will prove of interest to attending purchasers.

LYNCH & CO.

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OF

APOLLINARIS WATER, FRIEDRICHSHALL WATER, HUNYADI JÁNOS WATER, THE APOLLINARIS CO., LIM.,

19 REGENT STREET, LONDON, S.W.

SPECIAL PRICES ON APPLICATION.

CADBURY'S COCOA ESSENCE

The medical profession orders Cadbury's Cocoa Essence in thousands of cases, as the most wholesome beverage. Be sure

you get it when asked for, as imitations are often pushed for the sake of extra profit.

"We have carefully examined the samples brought under our notice, and find that they are genuine, and that the Essence of Cocoa is just what it is declared to be by Messrs. Cadbury Brothers."—*Lancet*.

"Cocoa treated thus will, we expect, prove to be one of the most nutritious, digestible, and restorative of drinks."—*British Medical Journal*.

GUARANTEED PURE AND SOLUBLE.

DO NOT LET YOUR CHILD DIE!

Fennings' Children's Powders Prevent Convulsions; are Cooling and Soothing.

FENNINGS' CHILDREN'S POWDERS

For Children Cutting their Teeth, to Prevent Convulsions.

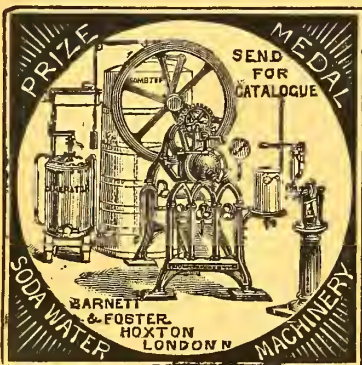
Sold in Stamped Boxes, at 1s. 1½d. and 2s. 9d. (great saving), with full Directions.

Do not contain Calomel, Opium, Morphia, nor anything injurious to a tender babe.

Chemists, by applying to the Patent Medicine Houses and Wholesale Chemists, can obtain, free of any charge, a supply of "FENNINGS' EVERY MOTHER'S BOOK," for Counter distribution.

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And all Appliances for the Manufacture of all Aerated Drinks in the highest state of perfection.



PRIZE MEDALS—London, 1862, 1873, 1874; Paris, 1867, 1878 Vienna Philadelphia, Cape, &c. HIGHEST AWARD—Sydney, 1870.

FIRST-CLASS CERTIFICATES & 4 PRIZE MEDALS, CALCUTTA, 1884.

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EXHIBITION, LONDON, 1884. 5 FIRST ORDERS OF MERIT, ADELAID 1887.

Our Machines are universally adopted throughout the world for the manufacture of all kinds of Aerated Drinks, whether in bottles, syphons, or counter fountains. There are alone over 2,000 factories where our Machinery is in use, besides many thousands in India and the Colonies. They are the simplest, safest, and cheapest for the purpose, and produce a highly-charged gaseous water free from metallic or foreign contamination. All our Machines have a Gasometer, and it forms a most important necessity where purity of product is required, as in this the gas is expanded and purified; it also removes the possibility of accidents by explosion, and avoids the necessity of complication—these we consider of greater importance than the saving of a few inches of floor space.

A complete Soda Water Plant, including Bottling Machine, for producing 100 dozen Lemonade, Ginger Beer, Ale, &c., per day, is supplied for £40.

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THE CHEMIST & DRUGGIST

SUPPLEMENT.

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Action Sales.

SATURDAY, APRIL 14, 1888.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

This Supplement will be given free to any Chemist and Druggist or Assistant who will call for it at 4 Cannon Street on Friday afternoon, or will be posted on Fridays to any one who sends an addressed postal wrapper.

ADVERTISEMENTS for this Supplement can be received on FRIDAY MORNING, first post, though it is requested that they may be sent in as early in the week as possible.

EXCHANGE COLUMN ADVERTISEMENTS will appear on page 6 (bottom folio), and must be received not later than THURSDAY AT NOON, to appear in the issue of the Saturday following.

Advertisements for this Supplement and Exchange Column must be prepaid. Remittances payable to EDWARD HALSE and Messrs MARTIN & Co.

OFFICES: 42 CANNON ST., LONDON, E.C.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS.

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1. LONDON, N.—Small increasing Business; Retail and Dispensing with Prescribing; situate in main road; returns over £500; well-fitted up and good stock; about £350 required.
2. LONDON, W.C.—Retail and Dispensing of good class; returns about £600 yearly; can be much improved; shop handsomely fitted, and large and convenient house; fernery, &c., attached; price £400.
3. LONDON, W.—Good-class Retail and Dispensing Business, with Mineral Water trade attached; returns average £1,700 yearly, with good profits; handsome shop and good stock; good house; every investment allowed; about £1,600 required.
4. LONDON, N.W.—Good locality; Retail and Dispensing with Prescribing; returns average £450, capable of being largely increased; large handsome shop and good stock; good house and garden; price £350.
5. LONDON SUBURBS, S.E.—Attractive locality; good-class Retail and Dispensing; returns nearly £1,000, with good profits; large attractive shop and good stock; price £850; references required.
6. LONDON, N.W.—First-class locality; good-class Business; returns over £1,000; large and handsomely-fitted shop, in good position; convenient house and premises; offer wanted.
7. DORSET COUNTY.—Fashionable locality; first-class Business for disposal; returns nearly £1,200; net profits over £400; large and convenient premises; bona fide purchasers will be furnished with full particulars on receipt of London reference.
8. MIDDLESEX.—No opposition near; rising suburb near town; good-class Business; returns nearly £425 (can easily be doubled by an energetic man); profits nearly £200; good house, low rental, large garden and conservatory; price £300.
9. WEST OF ENGLAND.—Good market town (main line); very old-established Business; returns over £500 (have been over £800), with good profits; good house and garden; valuation of stock and fixtures only required.
10. SUSSEX.—Fashionable locality; first-class Business, very old-established; large, handsome shop, double-fronted; returns £1,350 yearly, with good profits; price £1,100, or valuation terms can be arranged.
11. WITHIN THIRTY MILES OF LONDON.—Very old-established good-class Retail and Dispensing; returns average nearly £1,000; net profits over £300; handsomely-fitted shop and good stock; large and convenient house; price £800; anyone with £400 cash will be treated with; easy terms of payment can be arranged.
13. GLOUCESTERSHIRE.—Good-class Retail and Dispensing Business, with good appointment attached; returns about £600 yearly, increasing; profits good; large house; low rental; price £525.
13. KENT.—Good fashionable locality; Retail and Dispensing Business; returns average from profitable trade nearly £1,000; well fitted shop and good stock; about £750 required.
14. CHESHIRE.—Large town; an old-established Business, held in late owner's family for many years; an immediate purchaser required; present returns about £500, but have been upwards of £1,000; roomy house; capital warehouses; rent low; easy and exceptional terms can be arranged with an immediate purchaser.

N.B.—NO CHARGE TO PURCHASERS.

Of Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms, where business of a confidential nature requires the especial attention of a London agent.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

PARTNERSHIP.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

DRUGGIST, having a Mixed Chemist's business attached, but unable to attend properly, capable in successful hands of being trebled, would to competent man either sell his share of Chemist part, £1 15s. half-profit, or to non-purchaser would give the whole of extra profit up to 30s. and quarter after. "Dent," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BUSINESSES WANTED.

A RETAIL and Dispensing Business that will bear investigation; can invest £1,000 to £1,500; locality preferred, Southern or Eastern counties, or near London. Address, W. G., 178 Selsdon Road, South Croydon.

WANTED, a good suburban or country Business, making a net profit of from £400 to £500 a year; cash ready; all communications treated confidentially. Address, "Chemist," 91 Mansfield Road, London, N.W.

PARSON C. BAKER,

TRANSFER AGENT,

8 Stockbridge Terrace, S.W.
(CLOSE TO VICTORIA STATION).

IN the Midland Counties, a ready-money Retail; returns £450; price £200; low rent. In Nottingham, a ready-money Retail; old-established; returns £350; price, valuation of stock and fixtures. Buyers are invited to apply for particulars of other businesses on sale. Wanted to purchase, in London, a good Retail and Dispensing Business, returning from £1,200 to £1,500. In the county of Gloucester, or adjacent county, a genuine Family trade, requiring about £500 capital. In the South of England, a good Homeopathic Business; and on the East or South Coast, a genuine business, requiring about £1,000 capital. In the country, a good Family and Retail trade, requiring from £1,000 to £1,500.

TO LET.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

TO CHEMISTS.—Capital Shop in St. Mary Street, Cardiff; excellent position; good opening; low rent. Hern, Estate Agent, Cardiff.

HACKNEY Downs (just off); commanding Shop, plate-glass front, 8 rooms, washhouse, stabling at rear, back entrance; eligible for a Chemist and Druggist; rent £50. Mr. White, Surveyor, 1 Finsbury Square, E.C.

SHOP to be Let; only one out of a row of nine; in a respectable, populous, and increasing neighbourhood; no chemist within a radius of a mile; rent £50. Apply to Andrew Hart, 192 High Street, Stoke Newington; or Caretaker, Bodleian House, corner of Hill Street, Clapton Common.

RICHMOND.—Business Premises, in the very finest position in the town, opposite the chief post office, comprising an excellent shop, with plate-glass double front, capital residential accommodation, long yard in the rear, with back entrance; rent £150 per annum, on lease; premium required. To view apply to Messrs. Drew & Son, Estate Agents, George Street, Richmond.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

A SMALL Ready-money Business in the Potteries, the proprietor having another business; a first-rate opportunity for an energetic young man; price £100. Apply, M., care of Wyleys & Co., Wholesale Druggists, Coventry.

SOUTHPORT.—Light Retail and Dispensing Business, established; situated in leading thoroughfare; shop well fitted and stocked. Address, "Chemist," 10 Central Road, Withington, near Manchester.

OLD-ESTABLISHED Chemist's Business; good position, East End, centre of market; long lease; newly fitted; rent £70, £30 let off to good tenant; takings last year, £380; price £220; no agents; good reasons for leaving. Address, in first instance, "Beta," Sanger & Sons, Oxford Street, W.

BUSINESS in main thoroughfare for disposal, very cheap, at an upset price or discount off fair valuation to an immediate purchaser; owner retiring. Persons having £150 at command can apply to "Pharmacy," care of CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

COUNTY DURHAM; an old-established Business in good position in a large town; returns about £500, capable of increase; lease 6 years; valuation only easy terms to an immediate purchaser. Apply, J. P., Southall Bros. & Barclay, Birmingham.

AN old-established Prescribing and Light Retail Business for disposal in a large Midland town; very lucrative proprietaries attached; income about £600. For address, &c., apply, T. J., care of Messrs. Southall Bros. & Barclay, Birmingham.

A Splendid opportunity.—The advertiser is prepared to introduce a gentleman to a good agricultural business to be purchased a bargain; the returns are large and may be increased. *Bona-fide* purchasers, who can command £1,000 capital, may apply to B, care of Messrs. Idris Co., Ascham Street, Kentish Town.

IMMEDIATE, London, N.; £550; a good class ready-money Retail Dispensing and Prescribing Business, returning under manager £650 yearly; well fitted and stocked; excellent position; full investigation allowed; vendor leaving England cause of sale. Address "Stim," Messrs. Barron, Harvey & Co., Giltspur Street, London E.C.

LONDON (near).—Much desired and frequented locality; a Retail and Dispensing Business, recently opened, now doing £6 weekly, and capable of considerable increase; only one other Chemist; good house, moderate rent; price £250, part may remain. Address, E. N., care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

LONDON Suburb (S.).—Light Retail and Dispensing; situated in good locality; virtually unopened; conducted by manager, capable of great increase by principal; well fitted and stocked; convenient house, private entrance and garden; £550 required to purchase. R. T., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR Sale, old-established Chemist and Druggist's Business in large market town on main line; same hands 60 years; as proprietor is anxious to dispose, no reasonable offer will be refused to cash purchaser; better all-round value could not be got for small outlay; should be seen. "Proprietor," 42 Castle Street, Shrewsbury.

FOR Sale, a Branch in main thoroughfare of town of 13,000 inhabitants; opened 15 months; doing over £8 per week, under manager; a first-class opening for a young man; about £300. For further particulars apply, G. B. B., care of Barron, Harvey & Co., Giltspur Street, London, E.C.

DEVONSHIRE (same ownership 13 years).—Fixed country Business, returning £1,400; £700 is for drugs, £350 wines and spirits, and rest tea and tobacco; 10 new prescriptions yearly; rent £35; 8-roomed house, excellent storage, large shop; price about £800; cash purchase only. Apply, "Devon," care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A VALUABLE Proprietary Business for sale.—Gillingwater's world-renowned Hair-dye and Toilet preparations (10 proprietaries), from which a fortune was made by the late Mr. Gillingwater; with judicious vertising can soon again be made very remunerative; price for whole, with stock, £400 net. Apply to Mr. Bloodworth, of Gordon, Murray & Co., 50 Theobald's Road, W.C.

FOR SALE.—Chemist's Business at Mansfield. Owing to the death of the late Mr. Oldham, the executors have for immediate disposal a good Family business, successfully carried on for a period of 49 years; the little heavy trade in connection with it, being principally a profitable one of pharmacy. The shop is well situated and fitted in a good and substantial manner; no cutting returns about £1,500 a year, which could be considerably increased. Apply to Mr. J. E. Alcock, Solicitor, Mansfield.

SITUATIONS OPEN.

8d. for fifty words; 6d. for every 10 words beyond.

DISPENSER (experienced) wanted immediately for 5 or 6 weeks; state terms; outdoors. S. Collis, Druggist, Bath.

ASSISTANT for Branch, also Improver, required. Address, 33/35, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, an Assistant (indoors); Minor qualification necessary. State age and full particulars, with references, H., 23 St. James' Road, Kingston-on-Thames.

WANTED, an energetic young man to be at branch or principal establishment. Apply, stating age, salary required, and reference, E. C. Ashford, Chemist, Northampton.

ASSISTANT, indoors, able to Dispense, Extract Teeth, and attend ordinary Chemist's Retail. Apply, Druggist, 9 Dorrell Place, Brixton, London.

A Junior or Improver for Light Retail; comfortable home. Apply, stating age, reference, and salary required, Cole, Chemist, Leatherhead.

WANTED, Locum Tenens (qualified) for week commencing April 23rd. State usual particulars and references to J. Bainbridge, 152 Camberwell Road, S E

WANTED, at once, qualified Assistant for Dispensing Department; also Juniors for counter; hours 9 to 7; outdoors. Apply by letter only, stating salary and other particulars, The Chemist, 28 Haymarket, S.W.

INDOOR Assistant wanted; Minor qualification; used to a good mixed trade; must be good at prescribing and dressing window. D., 244 Westminster Bridge Road, London.

WISHARMAN, 247 Mare Street, Hackney, has a vacancy for a Junior Assistant of gentlemanly appearance and manners; aged about 21; preference given to one having a knowledge of dentistry; apply (personally preferred), with full particulars, salary required, and photo.

IMPROVER or Junior, for a select Retail and Dispensing Business; indoors; comfortable home. Apply, stating age, salary, &c., enclosing photo, to Frederick James Lea, Folkestone Pharmacy, Tontine Street, Folkestone. N.B. Also a vacancy for an Apprentice; terms moderate.

WANTED, an active Improver; time for study; comfortable home; excellent experience; or smart youth with small premium would be entertained as Apprentice. Apply, with full particulars, to "Pharmacist," 3 Carbridge Terrace, S.W.

WANTED immediately, Junior Assistant or Improver, indoors, in good-class Light Mixed trade; none preferred; an apprentice and warehouse boy also wanted. State age, experience, salary required, and reference to W. Laverack, Chemist, Malton.

CHEMIST (qualified) required, accustomed to making up stock preparations on a large scale. Address, stating age, experience, references, and salary required (no application will be entertained unless above information is fully furnished), G. F., 708, Messrs. Deacon, Leadenhall Street, London, E.C.

DRUG STORES.—Wanted, a smart active young man as Junior Assistant; indoors; one who is willing and obliging will find a most comfortable home; agricultural town; population 12,000; state height, age, and salary expected enclosing photo, which will be returned. Address, "Medical," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

TRAVELLERS and Agents wanted, who call upon Chemists and Grocers, to obtain orders for an article in daily use. Send stamped addressed envelope for samples to "Beta," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WILLIAM HESELTINE & SON, Wilson Street, Finsbury, E.C., are open to engage a first-class man to introduce and appoint Chemists as Agents for their Teas; liberal terms to one having necessary qualifications (see full page advertisement appearing in this issue). Apply by letter, as above, in first instance.

WHOLESAL Drug Trade.—A provincial house, of good standing, want a thoroughly competent Representative; only men of experience need apply, giving fullest particulars; salary not so much an object as efficient services. "Viator," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A PHARMACEUTICAL Chemist has an opening for a Turnover Apprentice or Improver, about 18 years of age; this is a good opportunity for acquiring a practical knowledge of the trade; a small premium required; he must have passed the Preliminary examination. Address, "Practical," Meggeson & Co., Miles Lane, London.

IMEDIATELY.—An outdoor Assistant, aged about 23, able to take sole charge of Branch; smart and active for a General Retail trade; able to prescribe; steady and trustworthy; state age, height, salary required, &c.; good references indispensable. Maitland, Chemist, 94 Treville Street, Plymouth.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR; aged 21; disengaged; good reference. "Alpha," 54 Eden Street, Kingston-on-Thames.

ASSISTANTSHIP; outdoor; aged 34; good references; London preferred. 5 Campbell Street, Hull.

BRANCH Manager or Assistant, in or outdoors. M., Preston-on-Wye, Hereford.

PART-TIME or Dispenser to Surgeon. B. P., 49 Great Coram Street, W.C.

AS Dispenser or Assistant; disengaged; aged 33. "Minor," 2 Eagle Place, Piccadilly.

MANAGER or Assistant; aged 37; abstainer; disengaged. C. W. B., 77 Branch Street, Burnley.

HOMOEOPATHIC or Mixed; Assistant or Manager (37). "Beta," 4 Borough Street, Brighton.

JUNIOR; aged 23; Mixed Business; satisfactory references. A. Grist, Bidboro, Tunbridge Wells.

IMPROVER; aged 16; willing to make himself useful; suburbs or country town; small salary, indoors. R., 5 Stafford Street, Marylebone Road, N.W.

BRANCH Manager or otherwise; energetic; experienced; first-class references; unqualified; married; 28 years of age. S., 26 Tyas Road, Canning Town, E.

ASSISTANT (21); tall; 5 years' experience in Dispensing and Retail; good references. Linfit House, Kirkburton, Huddersfield.

AS Junior Assistant; healthy; abstainer; good references; Leicester or Midlands preferred. Apply, Bonnor, Y.M.C.A., South Parade, Nottingham.

AS Assistant, with view to succession when qualified; married; good reference; aged 28. T. Parry, Post Office, Newington Causeway.

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WANTED, by an Assistant, aged 21, situation in Wholesale Drug House. Apply, W. R., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BY a youth, in Wholesale Druggist's, to assist in office and be generally useful. C., 3 Johnson's Road, Bromley, Kent.

JUNIOR; aged 21; good Retail and Dispensing experience; Minor qualification; good references. "Statim," 53 St. Peter's Road, Leicester.

ASSISTANT; disengaged; speaks French; 7 years' experience; aged 24; height 5 feet 9 inches; good references. G. C., 332 Queen's Road, Upton Park, E.

ASSISTANT (23); height 5 feet 7 inches; qualified; good experience and references; disengaged. J. J., Mr. Barker, Chemist, Queen's Road, Dalston.

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AS Assistant, unqualified, in dispensing business in or near London; 6 months' London experience; height 6 feet 1 inch. H. E. D., care of H. Horrell, Chemist, Dartford, Kent.

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